DOCUMENT RESUME

ED 138 925 08 CE 011 214

TITLE	Career Education Program, 1974-1975. Final Evaluation Report. Supplementary Information.
INSTITUTION	Research for Better Schools, Inc., Philadelphia, Pa.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	26 Sep 75
CONTRACT	NE-C-004-0011
NOTE	111p.; For a related document see 011 215
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	Attendance; Basic Skills; Career Education; *Data Analysis; Data Collection; Measurement Instruments; *Program Evaluation; Questionnaires; Racial Differences; School Districts; Secondary Education; Sex Differences; Student Attitudes; *Student Characteristics; Student Development; *Student Recruitment; *Vocational Development
IDENTIFIERS	Pennsylvania; *Research for Better Schools

ABSTRACT

Supplementary information (consisting of reports and instruments) to the final 1974-75 evaluation report of the Research for Better Schools (RBS) program are contained in this document. Five sections are included. The section on student recruitment and selection (28 pages) describes briefly background details concerning recruitment activities and selection procedures in the Philadelphia school district. An analysis plan (15 pages) for the evaluation of 1974-75 data from the RBS program, limited to description, attrition, data representativeness, student effects, and participant-perceived effects, is presented in the second section. The data format manual (35 pages) for fiscal year 1975 is included in the third section. The fourth section (13 pages) presents unpublished instruments (Student Demographic Data Questionnaire and the Student Attitude Survey) developed by the project. The final section, Analysis of Data Representativeness (10 pages), focuses on student attrition during the year 1974-75 and student absences during testing. (TA)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED138825

CAREER EDUCATION PROGRAM

1974 - 1975

FINAL EVALUATION REPORT

SUPPLEMENTARY INFORMATION

September 26, 1975

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Career Education Program

Research for Better Schools
1700 Market Street
Philadelphia, Pennsylvania 19103

OE 011314

CONTENTS

A. STUDENT RECRUITMENT AND SELECTION

B. ANALYSIS PLAN

C. DATA FORMAT

D. UNPUBLISHED INSTRUMENTS

E. ANALYSIS OF DATA REPRESENTATIVENESS

STUDENT RECRUITMENT AND SELECTION

STUDENT RECRUITMENT

AND SELECTION

FOR FY 1975

October 4, 1974

Career Education Program

Research for Better Schools, Inc.
1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103

ORGANIZATION

Section	Page
PART ONE - STUDENT RECRUITMENT	1
Introduction	1
Phase I	2
Phase II	5
Phase III	7
PART TWO - STUDENT SELECTION	9
Procedure	9
Results	10
Applicant Pool and Selection Group	12
Experimental Group and Control Group	13
FY 75 Student Groups	14
Students Enrolled in the Program	15
Students Utilized for Comparison Purposes	16
APPENDIX	18

STUDENT RECRUITMENT

INTRODUCTION

This is a two part report. Part I deals with student recruitment and Part II deals with student selection. Part I first describes briefly a few background details concerning why and when recruitment activities unfolded as they did, and secondly, describes where those activities took place. Recruitment activities are divided into phases according to the specific Philadelphia public schools involved at each point. Phase I describes those things that took place at the Olney main building, Phase II, those things that happened at the Olney Annex, and Phase III, activities at the feeder schools that supply Olney with new students.

The School District of Philadelphia has a nationally known network of alternative programs. Probably the best known is the Parkway School. Pupils use existing cultural, community and business resources to enhance their educational program. This network consists of approximately 70 alternative programs. Most of the alternative programs are housed near secondary schools in the city and recruit pupils from those schools. It is within the context of this network that the Academy for Career Education exists.

Olney High School, from which some of the Academy pupils were drawn, has an alternative program called the School for Human Concerns. They recruit pupils for their program during January and February. The Parkway School also recruits pupils for their program during the month of February. These facts are worth noting because the principal of Olney required a delay in recruitment for the Academy program until the above mentioned

programs concluded their recruitment activities. His rationale was that this schedule would diminish confusion about programs in the minds of the pupils. This meant that the earliest the Academy could begin recruiting pupils would be during the month of March which was later than was really desirable.

The second point in setting the background concerns several things that are particular to Olney. The school is overcrowded with a pupil population around 4200 housed in a school built for one-third that number. Rather than have two shifts, with all the problems inherent in that, the school administration operates one tight schedule running from 8:00 a.m. to 1:00 p.m. daily. That means pupils have only major subjects scheduled with none of the other activities (lunch periods, assembly periods, etc.) commonly associated with most secondary schools. This makes it very difficult to recruit pupils for a new program because recruitment time, especially for large groups, is not available in the schedule.

A third factor that has an implication for recruitment is that Olney schedules all its pupils on an individual basis. Pupils are given course selection sheets that explain what courses they have to take to prepare for a diploma and they pick from a course list what they would like to take. Those selections are fed into a computer and pupils are rostered. It's possible for no two pupils in the building to have the same roster. There is only one course that every student must take each year and that is English.

PHASE I ACTIVITIES

The Recruitment Team, knowing how diversely the students were scheduled and the lack of assemblies etc., met with the principal of Olney to try to

determine how the recruitment effort could best get off the ground. The Recruitment Team brought its Recruitment Plan (see Appendix) and began to plan how to best use the available resources. The principal suggested talking to the pupils about the program in their English classes and this way every student in the building could be reached. The principal agreed to contact the head of the English Department, tell him we wanted to use his department to recruit pupils for the Academy program, and have him plan with us the best way to do this.

The English department head met with the Recruitment Team (all department heads had already been oriented to the Academy program), gave us his approval, and asked the Recruitment Team to tell him when they would be coming to his department, who would be involved and what generally was going to be said. After this was accomplished, the department head supplied us with his department's teaching schedule and his staff's schedules.

The Recruitment Team decided that the persons best qualified to explicate the program to potential participants would be the counselor-coordinators. The director of the counselor-coordinators agreed that he and his staff should be heavily involved in recruiting pupils for the program.

The Recruitment Team met with the counselor-coordinators to set logistical issues i.e., where Olney is located, when we were going, for how long, etc. The Team then discussed the necessity for everyone being aware of certain basic assumptions about the program so that pupils wouldn't get conflicting views about the program.

It was agreed that there should be a 20 minute presentation explaining the three main parts of the Academy program - Basic Skills, Career Exploration/ Specialization, Individual and Group Guidance - as well as some of the activities and experiences that would take place under each. Interested

participants were then to be given an application to fill out, told where to return it and finally, if they had unanswered questions about the program to check with the Recruitment Team, housed at Olney in Room 211.

On any given day at Olney, 19 English classes are operating each period, which means during the operational six period day, 104 English classes are held. Two types of classes were excluded from recruitment activities. One was reading because the composition of reading classes duplicates regular English classes. The second type class excluded were the 12th graders because they would be graduating. This left 77 classes that could be addressed for recruitment purposes. Using just one or two persons would have dragged Phase I of the Recruitment Activities on for too long a period of time. Therefore, the Recruitment Team recommended six counselor-coordinators, or someone who would play a like role, be made available to talk to the students.

The Chamber of Commerce staff supplied four counselor-coordinators for two days, Wednesday and Thursday, March 6 and 7th. Two former counselors who since had become members of the Development Team were also involved. Each person went into classes for two days. Seventy-two (72) classes were covered in two days by these six people. The remaining classes were covered by the Recruitment Team on Friday.

The Recruitment Team was responsible for scheduling the Chamber staff into the correct rooms. They were also responsible for notifying the Olney English teachers as to when their class would be visited. Each counselor-coordinator was given a sheet listing the time and ending of each class period, the period number, room number and name of the teacher he/she was to visit and a stack of applications before the beginning of each day. The process went well with only one scheduling error: one 12th grade class was

scheduled by mistake.

The reactions from both Olney and Chamber staff seemed positive. The Chamber staff remarked how courteously they were treated by the Olney English teachers and several Olney staff remarked how professional the Chamber/RBS staff was. The process of going into six English classes in a row speaking about the program was exhausting for the Chamber staff.

The Recruitment Team put notices in the dailygram (flyer with notices that is distributed every day) before Phase I Recruitment Activities began telling pupils that people would be coming into their English classes to speak to them about the Academy for Career Education. As the counselor-coordinators were finishing their presentations, notices were put in the dailygram reminding pupils to return their applications or to get more information from the Recruitment Team in Room 211. No deadline was set for returning the applications.

PHASE II

This activity took place at Olney's other building which is an annex located at B and Wyoming Streets. The annex has its own administrative and teaching staff with each having some degree of autonomy from the main building. The building houses 9th graders who stay at the annex one year before going to the main building.

The Recruitment Team contacted the principal of the annex and secured his permission to recruit pupils from his building for the Academy program. The procedures used to recruit pupils were basically the same as those described in Phase I. However, several exceptions were worth noting.

One difference was in the size of the pupil population. There were approximately 700 students at the annex and recruitment activities were

accomplished by four counselor-coordinators within a one day time frame. They addressed a total of 18 English classes that day. A second difference was more a matter of perception concerning relationships. The teachers at the annex seemed to have established better relationships with the students compared with the main building. The counselors at the annex, mainly because of their different type of case load and because they knew the Academy program and were excited and enthused about it, also helped the recruitment activities. And lastly, since this was the second time around for the counselor-coordinators, they were much more polished and adept at explicating the Academy program.

One slight change in procedure was added by the counselor-coordinators. During the last day of recruitment at the main building, some of the counselor-coordinators began asking the pupils to fill out the application. if they were interested, and return them right away rather than wait to turn them in later. When the counselor-coordinators finished their presentations at the annex, they remained in the English classes and accepted applications right away. The results of this change in procedure were positive.

Follow-up notices were placed in the dailygram reminding pupils to get their applications in. Notices were also given to advisors asking them to remind their classes to have any pupil that hadn't turned in his application to do so. The second sheet of the application had a section that required a parental signature indicating the parent was giving his/her approval for the pupil to apply for the Academy program.

A list of pupils maintained by the Recruitment Team and, along with the applications, was turned over to the Evaluation Team for the selection process.

PHASE III

A decision made by the program director to include 9th grade pupils in 1974-75 recruitment activities necessitated dealing with the schools that supplied Olney with 9th grade pupils.

The Philadelphia School System is sub-divided into eight administrative districts. The lower and middle schools in each district feed the high school in that district. In administrative district 7 where Olney is located, there were five middle or K-8 schools that fed Olney incoming 9th graders. Those schools were Finletter, Olney Elementary, Creighton, Lowell and Morrison. The superintendent of district 7 invited the Recruitment Team to one of his monthly staff meetings for principals in his district. At that meeting, the Recruitment Team gave an hour presentation on the Academy program and how it was operating at Olney. The Recruitment Team also indicated that the program for 74-75 would include 9th graders and that they would like to come to the schools feeding Olney to explain the program and recruit pupils. The fact that the district superintendent approved and supported the Academy program helped to get each building principal's approval to recruit pupils for the program. The Recruitment Team then set up meetings with each of the principals involved to discuss how best to proceed in recruitment activities.

Most of the recruitment activiites at the feeder schools followed the same pattern. The Recruitment Team usually met with the teachers of 8th grade students, discussed what was going to happen, then set a date and time for coming to their rooms.

Each feeder school had two eighth grade classes. One staff member from the Recruitment Team made the presentations at the five schools. She

reported that the teachers were very cooperative and the students gave her their undivided attention. After she explained the program to the students, she asked them to follow this procedure: they were to fill out the application completely, discuss the program with their parents, have their parents sign the application if interested, and return the application to the main office as soon as possible. The teachers indicated that they would remind the pupils to get their applications in. The staff person then periodically stopped in the offices of the schools to retrieve applications that were there.

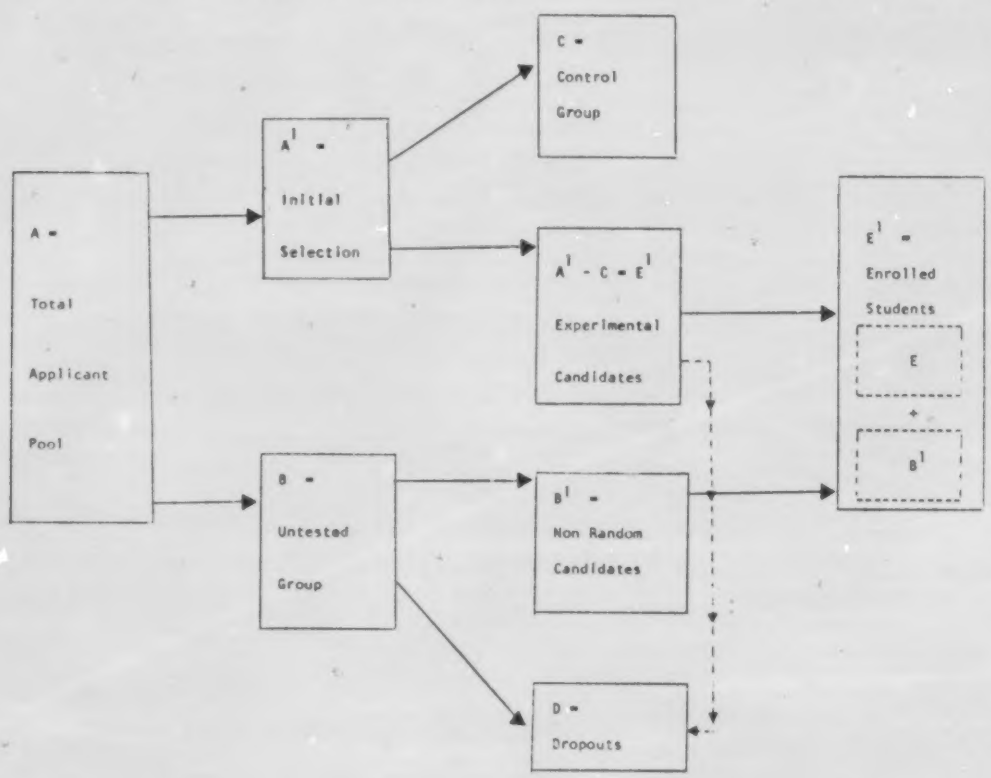
The list of applicants from feeder schools was prepared and maintained. That list, plus the applications, were turned over to the Evaluation Team for the selection process.

STUDENT SELECTION

PROCEDURE

Through the recruitment process discussed in the preceeding section a total of 464 candidates were identified for the 1974-1975 academic year of the Academy for Career Education. The next step in creating the new student body was to establish from this large applicant pool an experimental group which would actually enroll in the program and a control group which would be used for comparative purposes. This selection process needed to be fair to all applicants, adequate to ensure the desired enrollment level, and scientifically sound.

The selection process which was designed and implemented is described in memoranda which have been appended. The design was charted as follows:



The design called for an initial bifurcation of the total applicant pool (A) into two groups: the Selection Group (A^1) and the Untested Group (B). Members constituting the B Group would voluntarily withdraw themselves from consideration for the program by failing to appear for scheduled pre-enrollment sessions. These sessions were two in number: one for student selection of a cluster day and one for the administration of the pretest battery. It was reasoned that these sessions would serve to both gather important information and screen out the students who were less interested in the program. Since both experimental (E^1) and control (C) subjects were to be drawn from the reduced group (A^1), the comparability between these groups on motivation was enhanced. Since the reduced group (A^1) was constituted by student self selection, the possibility of unfair screening criteria was also avoided.

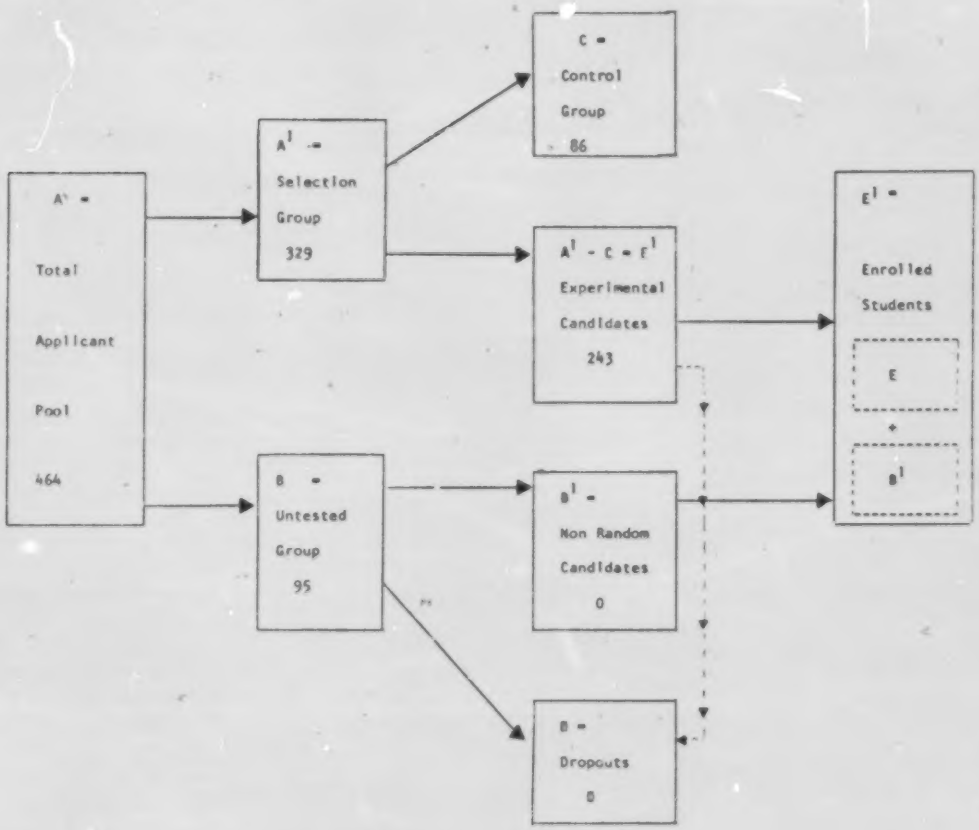
Students in the Selection Group (A^1) were then to be randomly divided into Experimental and Control groups. A proportion of the Experimental Group would enroll in the program, and some members of this group would drop out before the session began. If the dropout rate exceeded expectations, candidates could be sought from the Untested Group (B) or other sources (B^1) to meet student population requirements, but such candidates would not be part of experimental analyses. The plan was thus intended to be rigouous in a research sense while still being fair to the applicants and able to respond to practical contingencies.

RESULTS

In its implementation the selection plan occurred with exact fidelity to its design. It was even possible to conduct randomized selection

to experimental and control groups without employing stratification devices. These had been considered a contingent possibility to avoid a student population unfairly skewed with regard to demographic characteristics. In its enactment the selection process thus allowed absolute equal access to the program for each student who applied. Data were collected on all applicants as outlined in the format appended to this report.

Group membership at the various stages of the selection process was as follows:



Of the 464 total applicant pool, 329 entered the Selection Group by virtue of having attended the pre-enrollment sessions. Of these, 243 were randomly selected for the Experimental Group. These figures reflect the status of the groups as of June 1, 1974. It is anticipated that approximately 40 of these students will drop from the program before September, 1974 to produce the desired group of 200 new students.

Applicant Pool and Selection Group. The following statistical comparisons were made between the Applicant Pool (A) and the Selection Group (A^1):

RACE

	Black	White	Other
Applicant Pool	62%	33%	5%
Selection Group	64%	32%	4%

SEX

	Male	Female
Applicant Pool	33%	67%
Selection Group	31%	69%

GRADE LEVEL

	9	10	11	12
Applicant Pool	20%	15%	51%	14%
Selection Group	20%	14%	52%	14%

ACHIEVEMENT

	Above Average	Average	Below Average	Unknown
Applicant Pool	35%	33%	26%	6%
Selection Group	35%	33%	26%	6%

As can be seen from these figures, the two groups were virtually identical on the variables measured. No background factor was indicated as affecting self selection out of the candidate pool.

Experimental Group and Control Group. The following statistical comparisons were made between the Experimental Group (E^1) and the Control Group (C):

RACE

	Black	White	Other
Experimental Group	62%	34%	4%
Control Group	67%	27%	6%

SEX

	Male	Female
Experimental Group	31%	69%
Control Group	30%	70%

GRADE LEVEL

	9	10	11	12
Experimental Group	20%	14%	52%	14%
Control Group	20%	14%	52%	14%

ACHIEVEMENT

	Above Average	Average	Below Average	Unknown
Experimental Group	33%	35%	28%	4%
Control Group	40%	29%	22%	9%

As can be seen from these figures, the two groups were similar on the variables measured. In the instance of ethnic proportions some difference was noted, but with a sample size of 86, only 2 students removed from one category and placed into another would account for that difference. In the case of achievement data some inversion in the Above Average and Average categories was noted between groups. Again with a sample of 86 only a small number of students (3) would account for this difference. Future analyses of pretest data will allow a finer determination of group equivalence, but presently available data do not suggest that significant differences will be found.

FY 75 STUDENT GROUPS

The student groups for the Academy for Career Education Program are derived from two sources: newly recruited students as described above and students returning from the previous year. Both sources consist of experimental and comparison subgroups.

Students Enrolled in the Program. The student body of the Academy will consist of new students who enroll from the group selected for FY 75 and students who continue from the FY 74 group. These two groups combined presently number 312 students. It is anticipated that this will reduce to approximately 250 by September, 1974. Group characteristics were as follows:

SEX

	New Students		Returning Students		Total Students	
	#	%	#	%	#	%
Male	75	31	41	59	116	37
Female	168	69	28	41	196	63
Total	243	100	69	100	312	100

RACE

	New Students		Returning Students		Total Students	
	#	%	#	%	#	%
Black	151	62	54	78	205	66
White	82	34	15	22	97	31
Other	10	4	0	0	10	3
Total	243	100	69	100	312	100

GRADE

	New Students		Returning Students		Total Students	
	#	%	#	%	#	%
9	48	20	0	0	48	16
10	35	14	0	0	35	11
11	126	52	34	49	160	51
12	34	14	35	51	69	22
Total	243	100	69	100	312	100

Students Utilized for Comparison Purposes. The students to be compared with Academy students will consist of two groups. The Control Group was derived from the selection process for FY 75 and is a random subgroup of the applicant pool. The Context Group was selected for FY 74 and is a random subgroup of the Olney (sending school) student population. The Control Group will be used in experimental comparisons, while the Context Group provides information on the "typical" high school student. These two groups combined presently number 130 students. Group characteristics were as follows:

SEX

	Control Students		Context Students		Total Students	
	#	%	#	%	#	%
Male	26	30	24	55	50	38
Female	60	70	20	45	80	62
Total	86	100	44	100	130	100

RACE

	Control Students		Context Students		Total Students	
	#	%	#	%	#	%
Black	58	67	26	59	84	65
White	23	27	18	41	41	32
Other	5	6	0	0	5	3
Total	86	100	44	100	130	100

GRADE

	Control Students		Context Students		Total Students	
	#	%	#	%	#	%
9	17	20	0	0	17	13
10	12	14	0	0	12	9
11	45	52	19	43	64	49
12	12	14	25	57	37	29
Total	86	100	44	100	130	100

In summary, the FY 75 student groups are as follows:

	New	Returning	Total
Experimental	243	69	312
Comparison	86	44	130
	329	113	442

These groups are subject to qualifications as discussed above. Over-samples have been selected to accommodate attrition.

APPENDIX

Recruitment Plan - Spring/Summer 1974

A. If recruitment is going to be successful, amplification of the program is a must.

B. The following steps will be taken to advertise the program;

1. An article written by a student in the program will be written for the school paper, Olney Highlights.

2. Strategic bulletin boards around the school will be covered depicting the program.

3. Bulletin boards in individual classrooms will be covered.

4. Signs will be put up throughout the building.

5. Notices will be run in the daily gram several days per week.

6. Letters will be sent to parents about the program.

7. Pupils already in the program will be encouraged to speak to their classmates about the program during their 10 minute daily break and during their advisory period.

8. Counselors will be encouraged to discuss the program with their counselees.

9. Procedures for Recruitment

    1. Meetings

        Meetings will be held with the Chamber of Commerce and RBS staff that will be involved in recruitment. The purpose of the meetings is to try to have all staff involved in explaining the program to Olney pupils speaking with one voice on several major issues, i.e., trying to house the center closer to Olney, Having the same length of day (except for exploration and guidance), what to do with the applications, etc.

    2. Notices

        Notices are placed in the daily gram stating the Academy is recruiting for next year, coordinators will be coming to their English classes beginning Wednesday, March 6, to explain the program to them, listen carefully to them and if interested in participating in the program to fill out an application and return it to room 211.

3. Events

a. Beginning Wednesday, March 6, four Chamber staff (cannot be identified because of variables) plus Lieb, Kavanaugh, Quinn and Turner will be going to each 9th, 10th, and 11th grade English class explaining the program. All the classes will have been covered by Wednesday, March 13. (Coordination of who should be in what class done by Turner)

b. Staff will explain the program, highlighting exploration, basic skills and guidance, distribute the applications for those interested in being considered, remind the pupils what to do with the applications, and answer questions if the 20 minute time limit permits. Pupils will be told to return applications to room 211 or their counselor by Friday, March 22. Additional questions can be answered by Quinn, Turner or Counselors. (No date for time limit on applications because it may have to be extended)

c. Notices will be running in the daily gram reminding pupils to apply for Academy program. When above process is completed, notices again will go into daily gram reminding interested pupils to get their applications in.

d. Note will be sent to English Department Head thanking him and his staff for allowing us to use his department.

e. Merv Krimins should endorse and support recruitment efforts by making several announcements over the loudspeaker system to the students.

f. As applications begin coming in, each will be recorded on a master sheet by Quinn and Turner and kept in a single file in room 211. As that list is being compiled, a "B" or "W" should be placed in upper right hand corner of the application and also put on the master list. A significant number of applications should be received by the deadline, Friday, March 22. (Staff may have some suggestions for recruitment and anything reasonable will be considered.) Applications will be turned over to the Evaluation Team for selection.

M E M O R A N D U M

TO: CEP Cabinet

FROM: Keith Kershner KK

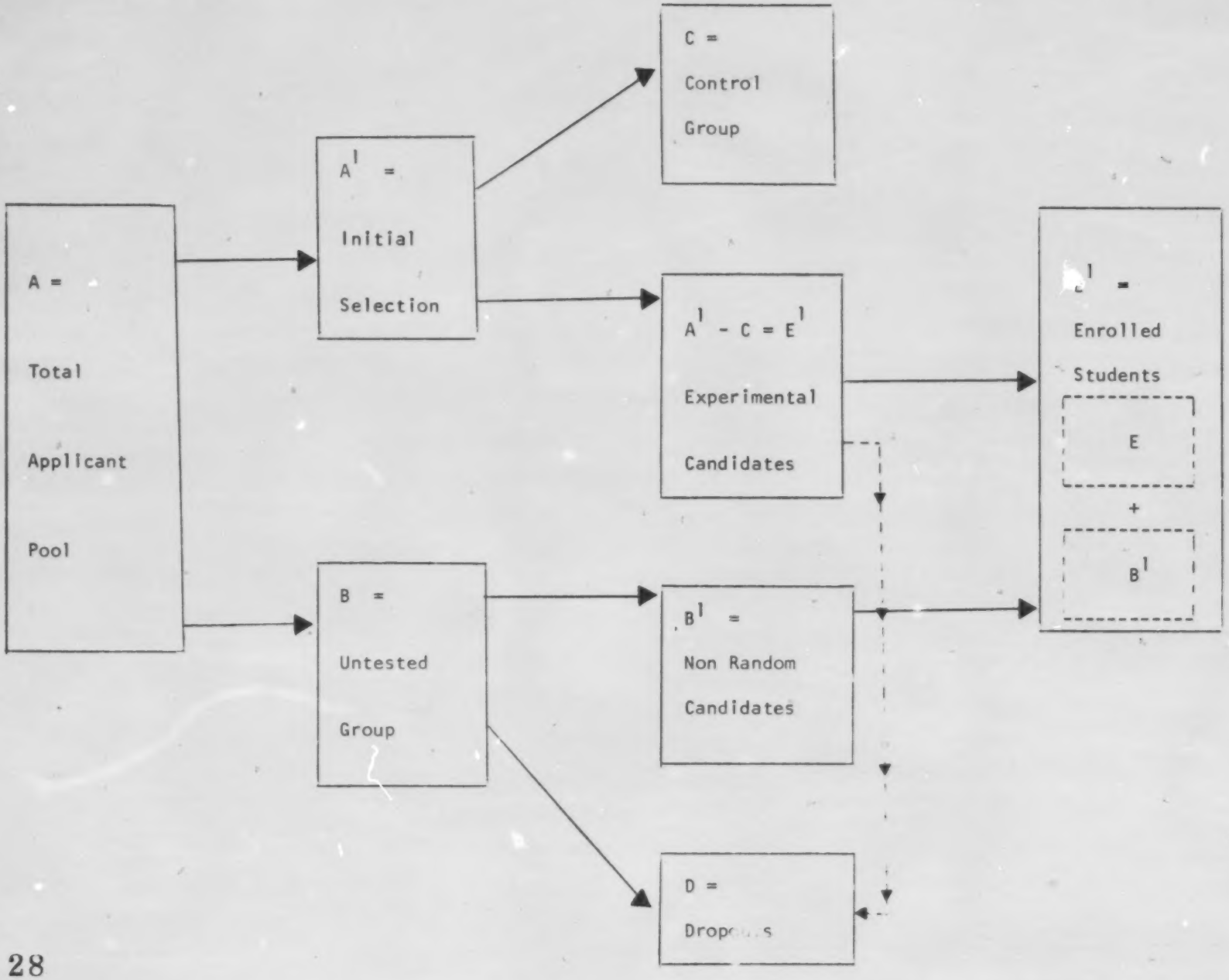
DATE: May 6, 1974

SUBJECT: PROPOSED STUDENT SELECTION PROCESS

The accompanying diagram outlines the proposed selection process for FY 1975 students. By this design the total applicant pool (A) would be tested during the week of May 20, 1974 on the CTBS Reading and Arithmetic Subtests and the Student Demographic Data Questionnaire. (2½ hours total time). From the group which appears for testing (A^1), a control group (C) of approximately 100 students would be randomly selected. The remainder (E^1) would be candidates for enrollment. Enrollees could also be sought from the untested group (B^1) to the extent necessary to fill out the student body. This design would ensure fulfilling the experimental requirements of NIE by establishing pure groups (C and E). It would also allow flexibility in student body size by providing other groups (B^1 or others) from which to draw without impinging upon the experimental design. Experimental and control groups would also be subject to similar attrition factors. Inspection of the final statistics regarding the applicant pool may indicate the need for stratified randomization.

It is anticipated that the A^1 group can be tested by May 24, 1974. Individual results should be prepared by May 31, 1974. The B^1 group may be tested by special arrangement.

KK/gg


A =
Total
Applicant
Pool
A' =
Initial
Selection
C =
Control
Group
A' - C = E'
Experimental
Candidates
B =
Untested
Group
B' =
Non Random
Candidates
D =
Dropouts
E' =
Enrolled
Students
E
+
B'

MEMORANDUM

TO: CEP Cabinet

FROM: Keith Kershner K.K.

DATE: May 10, 1974

SUBJECT: PROPOSED STUDENT SELECTION PROCESS

My memorandum of May 6, 1974 outlined a proposed flow for the selection process of FY 75 experimental and control students. This document is intended to propose specific mechanisms whereby the selection process may be accomplished.

The approach is to narrow down the total applicant pool to a selection pool by having applicants attend both a cluster day session and a testing session. This process should eliminate the less interested students and result in a selection pool which is more homogeneous regarding motivation. From this pool a control group will be randomly selected. The remainder will constitute the new experimental group. It is expected that this design will minimize the factors which might differentially affect attrition. The design further allows students from outside of the pool to be included in the project enrollment, but not in the experimental group. Such additions would not be permissible to the control group. Thus, first selection of the control group guarantees its integrity while leaving the enrolled sample flexible.

Accepting this approach, it is proposed that the control group size be defined as n = 75, or n = 20% selection group, whichever is larger. By this definition group size could vary as follows depending on the number of students present for testing (Selection Group):

	Selection Group Size	Control Group Size	Experimental Group Size
1.	450	90	360
2.	425	85	340
3.	400	80	335
4.	375	75	330
5.	350	75	275
6.	325	75	250
7.	300	75	225
8.	275	75	200
9.	250	75	175

If more than 350 students appear for the testing session, it seems likely that the size of the control group would have to be expanded beyond 20%.

Given group size, the next set of variables consists of desired group characteristics. Data regarding these variables have been taken from Michaelita Quinn's memo on "Characteristics of Olney Applicants" as of May 7, 1974.

ATTENDANCE

The applicants' distribution of reported prior attendance is heavily skewed, with 75% falling into the 24 or fewer days category. Previous experience would not vouch for the validity of reported attendance without qualifications. Assuming accuracy, the population is so homogeneous that sampling or analysis based on this variable cannot be considered.

ACHIEVEMENT

The achievement distibution has been reported as follows:

Above Average	-	35%
Average	-	34%
Below Average	-	25%
No Record	-	6%

These categorizations represent cumulative estimates of students' past school records. The distibution would seem to present a healthy spread of past achievement. It is recommended that this variable be used in analysis, but that it is unnecessary in selection. Random selection from the applicant group would result in the same distribution (35% - 34% - 25%) in the control and experimental groups.

GRADE

The grade levels among the applicant pool present a more difficult situation. They have been reported as follows:

9th Grade	-	23%
10th Grade	-	11%
11th Grade	-	51%
12th Grade	-	14%
No Record	-	1%

The heavy preponderance of 11th graders in the applicant pool will be further accentuated by the fact that 56% of the returning students will also be 11th graders. This extreme concentration makes the use of grade level in selection impossible, because it would result in control group cells as follows (based on 75 total):

9th Grade	-	22 students
10th Grade	-	10 students
11th Grade	-	48 students
12th Grade	-	13 students

This would render 2 cells statistically useless, and a third suspect for analysis purposes. Further,the Career Education Program is not organized according to grade level; it is individualized. The use of grade level as a differential screening mechanism therefore is not consistent with program rationale. For these reasons, it is recommended that chronological age be used as an analysis variable and that grade level be used neither in analysis nor selection.

SEX

The distribution of students in sex categories presents the most deviation from population statistics. It has been reported as follows:

Male	-	33%
Female	-	67%

This has two ramifications: First, the program may become identified as one for females, thus erroneously excluding 50% of future potential applicant pools. Second, there are sufficient variables associated with sex to indicate that this imbalance may seriously slant results. For these reasons it is recommended that sex be used both in analysis and selection.

RACE

The racial distribution is skewed, but not too far from that existing in the sending school:

Black	-	62%
Non-Black	-	38%

This is a significant improvement in representativeness over last year. Considering the closeness of the sample and population characteristics, and the sensitivity of the variable, it is recommended that race be excluded from consideration in selection and included in analysis only for descriptive purposes or where explicit hypotheses have been stated.

In summary, it is recommended that the control group be selected randomly with no consideration to variables other than sex. The specifics of this proposal and its anticipated results follow.

After testing has been completed, the cards (punched from application data) of those students who attended will be pulled to form the applicant pool. Characteristics of this pool will then be tabulated. It is anticipated that the distributions on variables discussed will be similar to those found in the applicant pool. If wide divergence should occur, applicant pool distributions will be considered for proportional assignment. Since expected frequency analysis indicates that a 60% - 40% Male - Female split does not statistically violate the proportion existing in the applicant pool, this will be the most divergence accepted in the selection pool. Thus assuming student characteristics distributions(in the selection pool) similar to the applicant pool, and applying a 60-40 maximum discrepancy on sex, the students will be randomly drawn for the control group. All remaining students will then be available for the experimental group.

KK/gg

MEMORANDUM

TO: Michaelita Quinn
Jesse Turner
Maura Bock
Nancy Donovan
Jolai Elsberry
Bert Cooperstein
Michael Hill
Jim Johnson
Dan Roberts
Keith Kershner
Rick Dusewicz

FROM: Marilyn Norbom

SUBJECT: MONITORING TESTS

DATE: May 20, 1974

Following is the schedule for testing the new students. Sessions at Olney (Front and Masher Streets) will take place in the Instructional Materials Center in the basement of the building. Sessions at the B and Wyoming School (same address) will take place in the cafeteria. Dan or I will be responsible for getting the materials to the testing site and informing each of you of the driver.

MN/gs

Day	Time	Place	Number of Students	Proctors
Wed (May 22)	8-10:30	B and Wyoming	110	Marilyn Jim Michaelita Jesse
Wed (May 22)	11-1:30	B and Wyoming	110	Marilyn Jim Michaelita Jesse
Wed (May 22)	9-11:30	Olney	111	Dan Keith Rick Nancy
Thurs (May 23)	9-11:30	Olney	137	Dan Keith Jim Rick Bert Mike
Thurs (May 23)	2-4:30	Olney	make up	Dan Jim

Format - Student Selection FY 1975

Cols	Description	Code
1-3	Application Number	
4-15	Last Name	
16-21	First Name	
22-26	House Number	
27	Street Directional Designation	
28-36	Street Name	
37-41	Zip Code	
42-48	Last Name Parent or Guardian	
49-55	Telephone Number	
56-61	Birth Date	
62-70	Social Security Number	
71	Sending School	1=Olney High School 2=Annex 3=Creighton Elem. 4=Finletter Elem. 5=Lowell Elem. 6=Morrison Elem. 7=Olney Elem.
72	Race	1=Black 2=White 3=Other 9=Unknown
73	Sex	1=Male 2=Female
74-75	Grade	
76	Achievement	1=Above Average 2=Average 3=Below Average 9=Unknown
77	Attendance (days absent)	1=less than 25 days 2=25-34 days 3=35-44 days 4=45 or more 9=Unknown
78-80	Book Number	

ANALYSIS PLAN

RBS CAREER EDUCATION PROGRAM

FY 1975 EVALUATION

ANALYSIS PLAN

Career Education Program
Research for Better Schools, Inc.
1700 Market St., Suite 1700
Philadelphia, Pennsylvania 19103

April 30, 1975

This document is based upon preliminary plans submitted January 31, 1975 and February 28, 1975.

Preliminary data analysis plans have been submitted on January 31, 1975 and in revised form on February 28, 1975. Since these versions were completed, much thought has been given to the scope of analyses planned, the technical adequacy of the elements proposed and the interpretability of the results to be produced. The initial plans were comprehensive to the point where available resources could not reasonably support the completion of all tasks with equal quality. Previous plans did not sufficiently focus effort on RBS' unique ability to test student effects under true experimental conditions. They also dictated a range of output whose extensiveness and diversity might inadvertently obscure central findings.

With these considerations in mind it was decided to sharpen the analysis design by selecting certain elements for concentration and refining procedures relating to them. The selection of design elements was based upon their centrality to testing implementation of the RBS career education model, the likely conclusiveness of results to be obtained, and the pertinence of results to the dissemination and research audiences. The refined plan is presented in this document.

This plan consists of five major elements as follows:

1. Descriptive Analyses
2. Analyses of Attrition
3. Data Representativeness
4. Analyses of Student Effects
5. Participant-Perceived Effects

Descriptive Analyses will present basic data on each of the experimental and comparison groups involved in this year's evaluation. These will be

based on the samples as they were constituted at the beginning of the school year and will include mainly demographic data.

Analyses of Attrition will trace experimental group changes from the beginning to the end of the year. Subgroups of program dropouts will be identified and characteristics which differentiate them from retained students will be investigated.

Data Representativeness analyses will establish the degree of true experimental and true control group equivalence after attrition and testing absences have been subtracted from the randomized samples. This will involve the statistical comparison of students having complete data with those having incomplete data on relevant pretest variables.

Analyses of Student Effects are concerned with the testing of true experimental group performance vs. true control group performance in career skills, life skills and basic skills. This involves testing a set of formally structured hypotheses using the results of a pretest-posttest instrument package.

Participant-Perceived Effects consist of opinions concerning the program on the part of participating students, parents and resource personnel. These data will be gathered by the external evaluation contractor (ETS) and summarized in the internal report.

This plan thus calls for analyses which describe the students involved in the program and their comparison counterparts, investigate the dropout phenomenon, and rigorously test for student effects. It concentrates on the evaluation questions which are most central to the effectiveness of the implemented model and which can be answered most definitively within the established design. The plan attempts to fully utilize RBS' capability

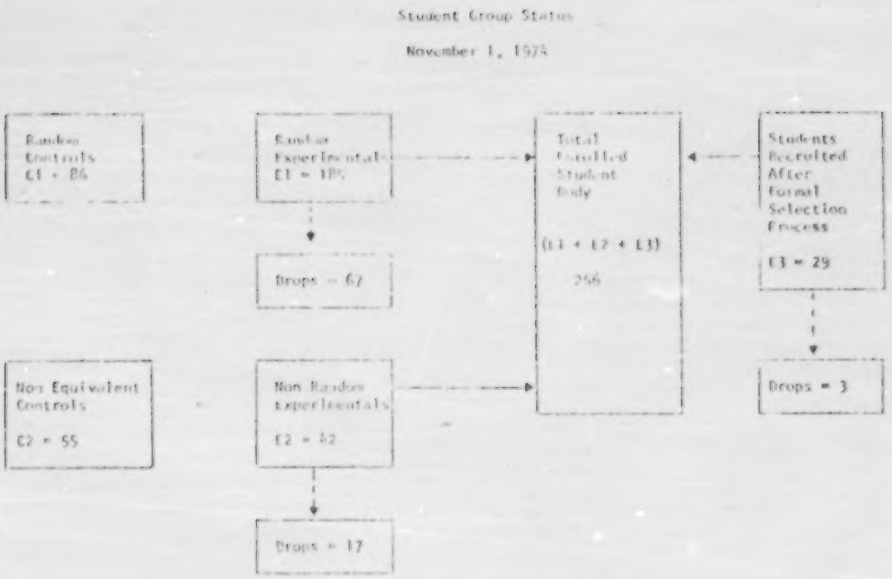
to attract and maintain large student groups within a true experimental paradigm. The plan is also organized to facilitate the production of a concise and useful final report. The final report will directly follow the scope and sequence of the analyses outlined here.

This revised analysis plan sacrifices several previously intended elements. These include analyses of attendance, second year effects and longitudinal studies. Such elements are considered to be important, but could not be justified for inclusion under the rigorous criteria discussed above. Some work will be done on them; separate reports may be issued as this work progresses.

The analyses specified in the present plan will be performed on data gathered from the experimental and control groups which have been established for FY 1975 (See Student Recruitment and Selection Report, October 4, 1974). These groups are designated as follows:

1. E1 - Randomly selected true experimentals
2. C1 - Randomly selected true controls
3. E2 - Non-randomly selected returning experimentals.
4. C2 - Non-equivalent returning controls
5. E3 - Non-randomly selected experimentals added to the program during the year.

Groups E1 and C1 were constituted to enable direct comparison under experimental design conditions. Groups E2 and C2 were retained from last year's samples for descriptive purposes. Group E3 has been added for descriptive purposes to include students recruited during the year. These groups are presented graphically below. Group size is subject to verification of the computer files.



Data will be gathered via the following instruments:

1. Student Demographic Data Questionnaire (SDQ) - This instrument was constructed by the evaluation staffs of all Experience-Based Career Education projects to provide common data on basic characteristics.

2. Comprehensive Tests of Basic Skills (CTBS) - This is a standardized test of basic academic performance. Reading, Arithmetic and Spelling subtests were used.

3. Career Maturity Inventory (CMI) - This is a standardized test of career attitude and several areas of career-related competencies. The attitude section has been revised by RBS.*

*This revision has become so extensive as to warrant dropping the "CMI" denotation. The attitude section is referred to below as the "Career Attitude Scale", which will be packaged with the BASS and ASA for posttest use.

4. Assessment of Student Attitudes Scale (ASA) - This instrument is currently under development by the evaluation staff. It is intended to measure attitude toward school and several elements in the learning environment.

5. Berger Acceptance of Self Scale (BASS) - This instrument was developed by E. Berger to measure attitude toward self. It has demonstrated high reliability and validity.

6. Self-Directed Search (SDS) - This commercially available instrument assesses the directionality of career interests and self perception of abilities and competencies related to those interests.

The SDQ was administered once during the selection procedures to gather information on non-criterion variables. All other instruments have been included in the pretest-posttest package for determination of student effects. All data thus gathered have been prepared for analysis as documented in the Data Format Manual for FY 1975, March 15, 1975.

With student groups and instruments as stipulated above the following analyses will be performed.

Descriptive Analyses

These analyses are designed to provide basic information on the total range of students involved in the FY 1975 experimental and comparison groups. The numbers and percents of students falling into the various categories under the following variables will be presented.

1. Age
2. Grade Level
3. Sex
4. Race
5. Grade Level by Sex and Race
6. Reasons for CEP Enrollment

7. Father's Educational Level
8. Mother's Educational Level
9. Father's Occupation
10. Mother's Occupation
11. Plans to Graduate
12. Post Secondary Plans
13. Immediate Occupational Plans
14. 5-Year Occupational Plans
15. Achievement Level

These data will be presented for groups E1, E2, E3, C1 and C2 as they were constituted at the beginning of the school year.

Descriptive analyses may serve to illustrate the demographic and background characteristics of groups entering the program and its comparison counterparts. Conclusions on group profiles and between group differences will be drawn. The reasons for enrollment in the program may also be explored.

Analyses of Attrition

The descriptive analyses establish group composition at the start of the year. This section traces experimental group (E1 and E2) change from the time of selection through the end of the year in an attempt to study the dropout phenomen.

Two distinct types of attrition occur. The first, pre-program, is during the summer; the second is during the course of the program year. Students falling into each category from the experimental groups will be

identified. Rates of attrition for each group and time period will be computed and differences between groups and time periods will be studied.

The effects of attrition on group composition will be documented and examined. Experimental group dropouts will be compared with those who remain using major non-criterion and criterion variable pretest data. Consistent differences between the groups will be sought. In this way it will be attempted to isolate the characteristics of dropouts. Similar procedures will be used to seek characteristic differences between pre-program and during-program dropouts.

These analyses should enhance understanding of the dropout phenomenon, allow formulation of hypotheses concerning predictor variables for program completion, and perhaps suggest student selection variables.

Data Representativeness

The experimental and control groups (E1 and C1) were originally constituted in May 1974 by random selection from a common pool of applicants for the program. The intention of random assignment was to establish true experimental conditions wherein comparative student effects could be tested with maximum student group equivalence. The major factor which typically mitigates the assurances provided by randomization is student attrition from the time of selection to the time of posttesting. A second factor is student absences during testing sessions. These factors both tend to reduce the power of initial randomization by introducing unknown biases into the final samples used for hypothesis testing. To the degree that characteristics of the missing cases are known, these biases may be tested and effects on hypothesis testing may be estimated. The

RBS evaluation design included gathering information on such characteristics. Thus it is imperative that missing cases be carefully analyzed against retained cases so that the representativeness of final samples can be ascertained.

In order to accomplish these analyses the final samples, students who took both the pretest and posttest packages, must be identified. Initially drawn samples will be reduced first by students who withdrew prior to the posttest, then by students who were absent for the posttest. All students were pretested on at least the SDQ and CTBS since these were application requirements. Remaining students will constitute the final samples; withdrawn and absent students will constitute the eliminated samples.

The final samples will first be compared with the eliminated samples on major non-criterion variables to ascertain the representativeness of final data pairs on demographic grounds. These comparisons will be conducted using "t" tests and chi square analyses on the following variables from the descriptive set:

1. Age
2. Sex
3. Race
4. Parent Occupation
5. Immediate Occupational Plans

Significant differences found between final and eliminated students within the EI and CI groups will suggest the need for investigation of stratified analyses of effects. The degree to which final and eliminated subsamples are found to be statistically not different will indicate the representativeness of the data used for hypothesis testing. These results will affect the conclusiveness attributable to evaluation findings.

The final samples will then be compared with the eliminated samples on all criterion variable pretests. This will be done on a subtest-by-subtest basis since each student may have completed some portions of measures but not others. Thus, "t" tests will be run on the pretest scores of final students vs. the pretest scores of eliminated students within groups for each criterion variable. The final and eliminated sample compositions may change for each test run. Significant differences will indicate limitations for the E1-C1 comparisons which assume group equivalence for those measures where they occur. Such instances will warrant investigation of compensatory statistics. The degree to which such differences are not found is the degree to which data representativeness is confirmed through this stage of analyses.

This section thus describes the testing of data representativeness comparing final samples with initial samples in terms of both non-criterion and criterion measures. Findings here if unsupportive of representativeness will necessitate adjustments in the analyses described below. Supportive results will enhance the conclusiveness of findings below. In either case, it will be possible to assess the representativeness of the data employed.

Analyses of Student Effects

The FY 1974 evaluation effort was focused on the determination of student outcomes of participating in the RBS Career Education Program for one year. This effort was tentative due to the nonequivalent nature of the experimental and control groups (E2 and C2). For FY 1975 a common pool of applicants was identified and students were randomly assigned from

this pool to "true experimental" and "true control" conditions (E1 or C1). The upgrading of selection procedures from a quasi-experimental to a "true experimental" level permits a definitive study of student outcomes of one year participation in the Career Education Program.

The following hypotheses will be tested under "true experimental" conditions. All deal with one year effects of the Career Education Program. The hypotheses fall into three major areas of effect: Career Skills, Life Skills and Basic Skills. Within each of these areas hypotheses have been stipulated regarding growth within the experimental group and comparative growth between experimental and control groups. These hypotheses are as follows:

Career Skills.

1. Experimental students (E1) will acquire increased ($p<.10$) mastery in career knowledge.

2. Experimental students (E1) will acquire significantly greater ($p<.10$) mastery in career knowledge than control students (C1) in a traditional high school.

3. Experimental students (E1) will acquire increased ($p<.10$) career maturity.

4. Experimental students (E1) will acquire significantly greater ($p<.10$) career maturity than control students (C1) in a traditional high school.

Life Skills.

5. Experimental students (E1) will acquire increased ($p<.10$) attitudes toward learning environments.

6. Experimental students (E1) will develop significantly more positive ($p<.10$) attitudes toward learning environments than control students (C1) in a traditional high school.

7. Experimental students (E1) will acquire increased ($p<.10$) attitudes toward self.

8. Experimental students (E1) will develop significantly more positive ($p<.10$) attitudes toward self than control students (C1) in a traditional high school.

Basic Skills.

9. Experimental students (E1) will acquire increased ($p<.10$) mastery in basic academic skills.

10. Experimental students (E1) will acquire significantly greater ($p<.10$) mastery in basic academic skills than control students (C1) in a traditional high school.

Statistical analyses have been selected to test the main effects associated with each hypothesis. These analyses are listed below and are numerically keyed to the hypotheses. This description of hypothesis testing techniques is predicated upon finding the final groups to be representative of the initial random groups. Exceptions to this predication will require adjustments in specific analyses.

Career Skills.

1. Descriptive statistics and correlated "t" tests on pretest and posttest scores of E1 group on CMI Occupation Information and Planning subtests.

2a. Descriptive statistics of E1 and C1 pretest and posttest scores on CMI Occupation Information and Planning Subtests.

2b. Analysis of variance on pretest CMI Occupation Information and Planning subtest scores of E1 and C1 groups.

2c. Analysis of variance or covariance (depending on 2b) on posttest CMI Occupation Information and Planning subtest scores of E1 and C1 groups.

3. Descriptive statistics and correlated "t" tests on pretest and posttest scores of the E1 group on the Revised Career Attitude Scale, pretest and posttest congruence of "primary occupation considered" to summary rating on the SDS.

4a. Descriptive statistics of E1 and C1 pretest and posttest scores on Revised Career Attitude Scale, pretest and posttest congruence of "primary occupation considered" to summary rating on SDS.

4b. Analysis of variance on pretest Revised Career Attitude Scale scores of EI and CI groups, 2X2 Chi Square tests on congruence of "primary occupation considered" to summary rating on SDS of EI and CI groups.

4c. Analysis of variance or covariance (depending on 4b) on posttest, Revised Career Attitude Scale scores of EI and CI groups, 2X2 or 2X4 Chi Square tests (depending on 4b) on the posttest congruence of "primary occupation considered" to summary rating on SDS for EI and CI groups.

Analysis (1) describes and tests the significance of EI growth in mastery of career knowledge as indicated by the Occupation Information and Planning subtests of the CMI. The (2) series of analyses tests the significance of differences in increased mastery of career knowledge by the EI and CI groups.

Analysis (3) describes and tests the significance of EI career maturation. Growth on two measures will be used to assess career maturation; the Revised Career Attitude Scale and the degree of congruence between the "primary occupation considered" and summary code of the SDS. The (4) series of analyses is designed to test the significance of differences in increased career maturation by the EI and CI groups.

Life Skills.

5. Descriptive statistics and correlated "t" tests on pretest and posttest scores of the EI group on the ASA.

6a. Descriptive statistics of EI and CI ASA pretest and posttest ratings.

6b. Analysis of variance on pretest ASA ratings of EI and CI groups.

6c. Analysis of variance or covariance (depending on 6b) on post-test ASA ratings of EI and CI groups.

7. Descriptive statistics and correlated "t" tests on pretest and posttest scores of the EI group on SDS self-estimates and BASS scores.

8a. Descriptive statistics of EI and CI pretest and posttest self-estimates on the SDS, EI and CI pretest and posttest ratings on the BASS.

8b. Analysis of variance on EI and CI group pretest self-estimates on the SDS, EI and CI group pretest ratings on the BASS.

8c. Analysis of variance or covariance (depending on 8b) on posttest self-estimates on the SDS, posttest ratings of EI and CI groups on the BASS.

Analysis (5) describes and tests the significance of EI change in attitudes toward learning environments as measured by the ASA. The (6) series of analyses tests the significance of differences in increased attitude toward learning environments by the EI and CI groups.

Analysis (7) describes and tests the significance of EI change in self-estimate as measured by the SDS and the BASS. The (8) series of analyses is needed to test the significance of differences in increased self-concept by the EI and CI groups.

Basic Skills.

9. Descriptive statistics and correlated "t" tests on pretest and posttest scores of EI group on CTBS.

10a. Descriptive statistics of EI and CI pretest and posttest CTBS scores.

10b. Analysis of variance on pretest CTBS scores of EI and CI groups.

10c. Analysis of variance or covariance (depending on 10b) on posttest CTBS scores of EI and CI groups.

Analysis (9) tests the hypothesis that EI students gain significantly in basic skills mastery. The (10) series of analyses is designed to test the significance of differences in increased mastery of basic academic skills by the EI and CI groups.

In addition to the testing of main effects, it is possible to study other effects associated with each hypothesis. Such investiga-

tion could consider variables such as sex, grade level, attendance, presenting levels, and demographic data. These analyses will not be utilized in the testing of hypotheses except where no main effects can be identified or where interaction effects are noted.

These analyses thus deal solely with one year effects tested under true experimental conditions. The hypothesized effects have been categorized under the areas of Career Skills, Life Skills and Basic Skills. Within each area significant growth by the experimental group during the treatment period has been hypothesized. Superior performance by the experimental group compared to non-treatment controls has also been hypothesized. Instruments have been selected to represent the skills central to program objectives; these have been administered in a pretest-posttest design. The proposed analyses compare posttest performance with pretest level to determine the nature and extent of change within the experimental group for each instrument. The analyses also test for differences in posttest performance on each measure between the experimental and control groups. The resultant within-group and between-group findings will support either the efficacy or failure of RBS Career Education in producting hypothesized student effects. Since the design is a strong one, and its execution has been excellent given the constraints of field experimentation, conclusions may be drawn with a relatively high level of confidence.

Participant-Perceived Effects

A major part of the external summative evaluation being conducted this year by ETS consists of polling opinions of participants in the program

regarding various aspects of their involvement. This will include students, their parents and participating resource site personnel. Students will be personally interviewed. Parents will be sent a questionnaire. Resource personnel may require a combination of interview and questionnaire techniques.

Some of the data gathered through these procedures will relate to program effects as perceived by each group of participants in the program. These results will be reviewed and summarized in the final report. Items will be collapsed into variables where possible, and individual item data will be employed in other cases. Relationships between these results and others described above will be explored where appropriate.

This document has presented an analysis plan for the evaluation of 1974-1975 data from the RBS Career Education Program. The scope of reported analyses has been limited to description, attrition, data representativeness, student effects and participant-perceived effects. It is believed that these analyses will facilitate the production of a cogent report which addresses central issues in a productive and conclusive fashion.

DATA FORMAT

DATA FORMAT MANUAL

FY 1975

Career Education Program
Research for Better Schools
1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103

July 1, 1974

Revised

October 1, 1974

December 1, 1974

March 15, 1975

This replaces all previous FY 1975 Format Manuals

CARD LISTING

Card No.	Description	Date	Prev. #
01	Student Identification Card	-	01
02	Student Demographic Data Card	-	-
03	FY 73 CTBS Pretest	9/72	03
04	Open	-	-
05	FY 74 CTBS Pretest (FY 73 Posttest)	9/73-6/73	04-05
06	Open	-	-
07	FY 75 CTBS Pretest (FY 74 Posttest)	5/74-6/74	06
08	Open	-	-
09	Fy 76 CTBS Pretest (FY 75 Posttest)	5/75	-
10	Open	-	-
11	FY 75 ASA Pretest	-	-
12	FY 75 ASA Posttest	-	-
13-20	FY 73 Learning Activities Record	9/72-8/73	13-20
21-28	FY 74 Learning Activities Record	9/73-8/74	21-28
29	Learning Activities Record Q 9	-	-
30	Learning Activities Record Q 10	-	-
31	Learning Activities Record Q 11	-	-
32	Learning Activities Record Q 12	-	-
33	Learning Activities Record Q 13	-	-
34	Learning Activities Record Q 14	-	-
35	Learning Activities Record Q 15	-	-
36	Learning Activities Record Q 16	-	-
37-38	FY 75 CMI Revision Pretest and CTBS Lang Sp.	-	-
39-40	FY 75 CMI Revision Posttest and CTBS Lang Sp.	-	-
41-42	Self-Directed Interest Inventory - FY 75 Pretest	-	-
43-44	Self-Directed Interest Inventory - FY 75 Posttest	-	-
45-100	Open	-	-

APPENDIX A - Prototype Evaluation Package Data Format Manual.
APPENDIX B - Codes Used in Data Formats.

CARD 01

Student Identification Card

Cols.	Description	Code
1	Student Status	Blank = Attending 1 = Withdrawn 2 = Graduated
2-5	Student Number	-
6	Blank	-
7-18	Last Name	-
19-25	First Name	-
26	Middle Initial	-
27-31	House Number	-
32	Street Directional Designation	-
33-41	Street Name	-
42-46	Zip Code	-
47-53	Telephone Number	-
54	Blank	-
55-56	Grade	-
57-59	Book Number	-
60	Cluster Day	1 = Tues. 2 = Wed. 3 = Thurs.
61	Sex	1 = Male 2 = Female
62	Race	1 = Black 2 = White 3 = Other

CARD 01

Student Identification Card
(Continued)

Cols.	Description	Code
63-64	Counselor	01 = Bragg 02 = Learner 03 = McCall 04 = McGown 05 = Naylor 06 = Philbin 07 = Spann 08 = Voron 09 = Waters 10 = Wheeler
65	Guidance Group Period	-
66-67	ARC Periods	-
68-78	Parent Name	-
79-80	Card Number	01

CARD 02

Demographic Data Card

Cols.	Description	Code
1	Project ID	A = AEL F = FWL N = NWL R = RBS
2-5	Student Number	A
6-7	Birth Month	-
8-9	Birth Year	-
10-11	Grade Level at Entrance	-
12-13	Year Entered	-
14	Quarter Entered	-
15	Sex	1 = Male 2 = Female
16	Race	B
17	Previous School GPA	C
18-19	Previous School Absence Estimate	D
20-21	Post Secondary Plans 1	E
22-23	Post Secondary Plans 2	E
24-25	Post Secondary Plans 3	E
26-27	Father's Educational Level	F
28-29	Mother's Educational Level	F
30	Reasons for CEP Enrollment 1	G
31	Reasons for CEP Enrollment 2	G
32	Reasons for CEP Enrollment 3	G
33	Plans to Graduate	1 = Yes 2 = No 3 = Not Sure
34	School is Worthwhile	5 = Strongly Agree 1 = Strongly Disagree
35	Learned in School	5 = Strongly Agree 1 = Strongly Disagree
36-37	Father's Occupation	H
38-39	Mother's Occupation	H
40-41	Immediate Occupational Plans	H
42-43	5-Year Occupational Plans	H
44-78	Blank	-
79-80	Card Number	02

CARDS 03, 05, 07, 09

CTBS Reading and Arithmetic

Cols.	Description	Code
1	Blank	-
2-5	Student	-
6	Blank	-
7-9	Reading Voc R.S	-
10-12	Reading Voc G.E.	w/o decimal pt
13-15	Reading Voc S.S.	-
16-18	Reading Comp R.S.	-
19-21	Reading Comp G.E.	w/o decimal pt
22-24	Reading Comp S.S.	-
25-27	Reading Total R.S.	-
28-30	Reading Total G.E.	w/o decimal pt
31-33	Reading Total S.S.	-
34	Blank	-
35-37	Arith-Compu R.S.	-
38-40	Arith-Compu G.E.	w/o decimal pt
41-43	Arith-Compu S.S.	-
44-46	Arith-Concpt R.S.	-
47-49	Arith-Concpt G.E.	w/o decimal pt
50-52	Arith-Concpt S.S.	-
53-55	Arith-Appl R.S.	-
56-58	Arith-Appl G.E.	w/o decimal pt
59-61	Arith-Appl S.S.	-
62-64	Arith-Total R.S.	-
65-67	Arith-Total G.E.	w/o decimal pt
68-70	Arith-Total S.S.	-
71-78	Blank	-
79-80	Card Number	(03 - 09)

CARD 11 & 12

Assessment of Student Attitudes Scale

Pretest and Posttest

Cols.	Description		Code
1	Blank		-
2-5	Student Number		-
6	Blank		-
7	Q4		-
8-9	Blank		-
10	Q15		-
11	*Q16		-
12	*Q18	Subtest #1	-
13	*Q19		-
14	Q21		-
15	Blank		-
16	*Q26		-
17	Q1		-
18	*Q7		-
19	Q8		-
20-25	Blank		-
26	*Q17	Subtest #2	-
27	Blank		-
28	Q20		-
29-33	Blank		-
34	*Q2		-
35	*Q3		-
36	Q6		-
37	Q10	Subtest #3	-
38	*Q11		-
39	Blank		-
40	Q13		-
41	Q14		-
42	*Q22		-
43	*Q25		-
44	Q5		-
45	*Q9		-
46	Blank	Subtest #4	-
47	Q12		-
48-49	Blank		-
50	*Q23		-
51	*Q24		-
52-78	Blank		-
79-80	Card Number		11 or 12

*Negative polarity

CARD 13

through

CARD 20

These learning activity record cards for Quarter 1 through 4 (FY 73) are located in the first year data bank and follow the same format as the Learning Activity Records which follow.

CARD 21

through

CARD 28

These learning activity record cards for Quarter 5 through 8 (FY 74) are located in the second year data bank and follow the same format as the Learning Activity Records which follow.

CARDS 29 - 36

Learning Activities Record

Cols.	Description	Code
1	Blank	-
2-5	Student Number	-
6	Quarter	1 = 1972-73 2 = 1973-74 3 = 1974-7575 4 = 1975-76 5 = 1976-77
8-10	Course 1 Number	I
11-12	*Course 1 Hours per Week (0.0)	-
13-14	Course 1 % Attendance	-
15-16	*Course 1 Grade	J
17-19	Course 2 Number	I
20-21	*Course 2 Hours per Week (0.0)	-
22-23	Course 2 % Attendance	-
24-25	*Course 2 Grade	J
26-28	Course 3 Number	I
29-30	*Course 3 Hours per Week (0.0)	-
31-32	Course 3 % Attendance	-
33-34	*Course 3 Grade	J
35-37	Course 4 Number	I
38-39	*Course 4 Hours per Week (0.0)	-
40-41	Course 4 % Attendance	-
42-43	*Course 4 Grade	J
44-46	Course 5 Number	I
47-48	*Course 5 Hours per Week (0.0)	-
49-50	Course 5 % Attendance	-
51-52	*Course 5 Grade	J
53-55	Course 6 Number	I
56-57	*Course 6 Hours per Week (0.0)	-
58-59	Course 6 % Attendance	-
60-61	*Course 6 Grade	J
62-64	Course 7 Number	I
65-66	*Course 7 Hours per Week (0.0)	-
67-68	Course 7 % Attendance	-
69-70	*Course 7 Grade	J
71-78	Blank	-
79-80	Card Number	(29-36)

*Hours and grades omitted from FY 75 Records.

CARD 37 & 39

FY 75 CMI Revision Pretest and Posttest

Cols.	Description	Code
1	Blank	-
2-5	Student Number	A
6	Blank	-
7-31	Q1 - Q25	CP = 9,10,11,15,16, 17,19,21,27,29 CK = 7,8,12,13,14, 18,20,22,23,24, 25,26,28,30,31
32-67	Q26 - 61	Pos = 33,38,46,50, 52,56,58,63 Neg = all others
68-78	Blank	-
79-80	CARD NUMBER	37 or 39

CARD 38 & 40

FY 75 CMI Revision Pretest and Posttest
(Continued)

Cols.	Description	Code
1	Blank	-
2-5	Student Number	A
6	Blank	-
7-26	Q62-Q81	-
27	Blank	-
28-47	Q82-Q101	-
48	Blank	-
49-51	Part 1 Score	X.XX
52-53	Part 2 Score	XX
54-55	Part 3 Score	XX
56-57	Blank	-
58-59	CTBS Lang Sp RS	-
60-62	CTBS Lang Sp GE	w/0 dec. pt.
63-65	CTBS Lang Sp SS	-
66-78	Blank	-
79-80	CARD NUMBER	38 or 40

CARD 41 & 43

Self-Directed Interest Inventory Pretest & Posttest

Cols.	Description	Code
1	Blank	-
2-5	Student Number	A
6	Blank	-
7-24	Occupations Daydreams	
7-9	1	3 number code
10-12	2	3 number code
13-15	3	3 number code
16-18	4	3 number code
19-21	5	3 number code
22-24	6	3 number code
	Blank	-
26-37	Activities Scores	
26-27	R	00 - 11
28-29	I	00 - 11
30-31	A	00 - 11
32-33	S	00 - 11
34-35	E	00 - 11
36-37	C	00 - 11
38-43	Activities Ranks	
38	R	1 - 6
39	I	1 - 6
40	A	1 - 6
41	S	1 - 6
42	E	1 - 6
43	C	1 - 6
44	Blank	-
45-46	Compentencies Scores	
45-46	R	00 - 11
47-48	I	00 - 11
49-50	A	00 - 11
51-52	S	00 - 11
53-54	E	00 - 11
55-56	C	00 - 11

CARD 42 & 44

Self-Directed Interest Inventory Pretest and Posttest

Cols.	Description	Code
1	Blank	-
2-5	Student Number	A
6	Blank	-
7-12	Occupations - Ranks	
7	R	1 - 6
8	I	1 - 6
9	A	1 - 6
10	S	1 - 6
11	E	1 - 6
12	C	1 - 6
13	Blank	-
14-19	Self Estimate 1 - Score	
14	R	0 - 7
15	I	0 - 7
16	A	0 - 7
17	S	0 - 7
18	E	0 - 7
19	C	0 - 7
20-25	Self Estimate 1 - Ranks	
20	R	1 - 6
21	I	1 - 6
22	A	1 - 6
23	S	1 - 6
24	E	1 - 6
25	C	1 - 6
26	Blank	-
27-32	Self-Estimate 2 - Score	
27	R	0 - 7
28	I	0 - 7
29	A	0 - 7
30	S	0 - 7
31	E	0 - 7
32	C	0 - 7

CARD 42 & 44

Self-Directed Interest Inventory Pretest and Posttest
(Continued)

Cols.	Description	Code
33-38	Self Estimate 2 - Ranks	
33	R	1 - 6
34	I	1 - 6
35	A	1 - 6
36	S	1 - 6
37	E	1 - 6
38	C	1 - 6
39	Blank	-
40-51	Total Scores	
40-41	R	00 - 50
42-43	I	00 - 50
44-45	A	00 - 50
46-47	S	00 - 50
48-49	E	00 - 50
50-51	C	00 - 50
52-63	Total Weights	
52-53	R	00 - 15
54-55	I	00 - 15
56-57	A	00 - 15
58-59	S	00 - 15
60-61	E	00 - 15
62-63	C	00 - 15
64-65	Blank	-
66-68	First Category	-
69	Blank	-
70-73	Second Category	-
74-76	Third Category	-
77-78	Blank	-
79	Card Number	42 or 44

APPENDIX

A

PROTOTYPE EVALUATION PACKAGE

DATA FORMAT MANUAL

Career Education Program
Research for Better Schools
1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103

March 15, 1975

This is an attachment to the FY 1975 Format Manual.

CARD LISTING

Card No.	Description
101	Student Identification
102	Demographic Data
103	CTBS Reading and Arithmetic
104	CTBS Language and Study Skills
105	Student Attitude
106	Self Directed Search
107	Self Directed Search
108	CMI Competence Tests

CARD 101

Student Identification Card

Cols.	Description	Code
1-2	Site ID	-
3-6	Student Number	A
7-18	Last Name	-
19-25	First Name	-
26	Middle Initial	-
27-31	House Number	-
32	Street Directional Designation	-
33-41	Street Name	-
42-46	Zip Code	-
47-53	Telephone Number	-
54	Blank	-
55-56	Grade	-
57-59	Blank	-
60	Cluster Day	1 = Mon. 2 = Tues. 3 = Wed. 4 = Thurs. 5 = Fri.
61	Sex	1 = Male 2 = Female
62	Race	1 = Black 2 = White 3 = Other
63-64	Counselor	-
65-66	Guidance Group Period	-
67-68	ARC Periods	-
69-75	Blank	-
76	Student Status	Blank = Attending 1 = Withdrawn 2 = Graduated
77	Blank	-
78-80	Card Number	101

CARD 102

Demographic Data Card

Cols.	Description	Code
1-2	Site ID	-
3-6	Student Number	A
7-8	Birth Month	-
9-10	Birth Year	-
11-12	Grade Level at Entrance	-
13-14	Year Entered	-
15	Sex	1 = Male 2 = Female
16	Race	B
17	Previous School GPA	C
18-19	Previous School Absence Estimate	D
20-21	Post Secondary Plans 1	E
22-23	Post Secondary Plans 2	E
24-25	Post Secondary Plans 3	E
26-27	Father's Educational Level	F
28-29	Mother's Educational Level	F
30	Reasons for CEP Enrollment 1	G
31	Reasons for CEP Enrollment 2	G
32	Reasons for CEP Enrollment 3	G
33	Plans to Graduate	1 = Yes 2 = No 3 = Not Sure
34-35	Blank	-
36-37	Father's Occupation	H
38-39	Mother's Occupation	H
40-41	Immediate Occupational Plans	H
42-43	5-Year Occupational Plans	H
44-77	Blank	-
78-80	Card Number	102

CARD 103

CTBS Reading and Arithmetic

Cols.	Description	Code
1-2	Site ID	-
3-6	Student ID	-
7-9	Reading Voc R.S.	-
10-12	Reading Voc G.E.	w/o decimal pt
13-15	Reading Voc S.S.	-
16-18	Reading Comp R.S.	-
19-21	Reading Comp G.E.	w/o decimal pt
22-24	Reading Comp S.S.	-
25-27	Reading Total R.S.	-
28-30	Reading Total G.E.	w/o decimal pt
31-33	Reading Total S.S.	-
34	Blank	-
35-37	Arith-Compu R.S.	-
38-40	Arith-Compu G.E.	w/o decimal pt
41-43	Arith-Compu S.S.	-
44-46	Arith-Concpt R.S.	-
47-49	Arith-Concpt G.E.	w/o decimal pt
50-52	Arith-Concpt S.S.	-
53-55	Arith-Appl R.S.	-
56-58	Arith-Appl G.E.	w/o decimal pt
59-61	Arith-Appl S.S.	-
62-64	Arith-Total R.S.	-
65-67	Arith-Total G.E.	w/o decimal pt
68-70	Arith-Total S.S.	-
71	Form	-
72	Level	-
73-77	Blank	-
78-80	Card Number	103

CARD 104

CTBS Language and Study Skills

Cols.	Description	Code
1-2	Site ID	-
3-6	Student Number ID	-
7-9	Lang Mech R.S.	-
10-12	Lang Mech G.E.	w/o decimal pt
13-15	Lang Mech S.S.	-
16-18	Lang Expr R.S.	-
19-21	Lang Expr G.E.	w/o decimal pt
22-24	Lang Expr S.S	-
25-27	Lang Spell R.S.	-
28-30	Lang Spell G.E.	w/o decimal pt
31-33	Lang Spell S.S.	-
34-36	Lang Total R.S.	-
37-39	Lang Total G.E.	w/o decimal pt
40-42	Lang Total S.S.	-
43	Blank	-
44-46	Total Battery R.S.	-
47-49	Total Battery G.E.	w/o decimal pt
50-52	Total Battery S.S.	-
53	Blank	-
54-56	Study Skills R.S.	-
57-59	Study Skills G.E.	w/o decimal pt
60-62	Study Skills S.S.	-
63	Form	-
64	Level	-
65-77	Blank	-
78-80	Card Number	104

CARD 105

Student Attitudes

Cols.	Description	Code
1-2	Site ID	-
3-6	Student Number	A
7	Blank	-
8-10	Attitude Toward Education in General	X.XX
11	Blank	-
12-14	Attitude Toward School Curriculum	X.XX
15	Blank	-
16-18	Attitude Toward School Resources	X.XX
19	Blank	-
20-22	Attitude Toward School Counseling	X.XX
23	Blank	-
24-26	Overall Attitude Toward Learning Environments	X.XX
27	Blank	-
28-30	Attitude Toward Career Knowledge	X.XX
31	Blank	-
32-34	Attitude Toward Career Planning	X.XX
35	Blank	-
36-38	Overall Attitude Toward Careers	X.XX
39	Blank	-
40-42	Attitude Toward Self	X.XX
43	Blank	-
44-46	Attitude Toward Others	X.XX
47-77	Blank	-
78-80	Card Number	105

CARD 106

Self Directed Search

Cols.	Description		Code
1-2	Site ID		-
3-6	Student Number		A
7-9	Primary Occupation		-
10	Blank		-
11-22	Activities Scores		
	11-12	R	00-11
	13-14	I	00-11
	15-16	A	00-11
	17-18	S	00-11
	19-20	E	00-11
	21-22	C	00-11
23	Blank		-
24-29	Activities Ranks		
	24	R	1-6
	25	I	1-6
	26	A	1-6
	27	S	1-6
	28	E	1-6
	29	C	1-6
30	Blank		-
31-42	Competencies Scores		
	31-32	R	00-11
	33-34	I	00-11
	35-36	A	00-11
	37-38	S	00-11
	39-40	E	00-11
	41-42	C	00-11
43	Blank		-
44-49	Competencies Ranks		
	44	R	1-6
	45	I	1-6
	46	A	1-6
	47	S	1-6
	48	E	1-6
	49	C	1-6
50	Blank		-

CARD 105

Self Directed Search
(Continued)

Cols.	Description		Code
51-62	Occupations Scores		
	51-52	R	00-11
	53-54	I	00-11
	55-56	A	00-11
	57-58	S	00-11
	59-60	E	00-11
	61-62	C	00-11
63	Blank		-
64-69	Occupations Ranks		
	64	R	1-6
	65	I	1-6
	66	A	1-6
	67	S	1-6
	68	E	1-6
	69	C	1-6
70-77	Blank		-
78-80	Card Number		106

CARD 107

Self-Directed Search

Cols.	Description		Code
1-2	Site ID		-
3-6	Student Number		A
7	Blank		-
8-13	Self Estimates I - Scores		
	8	R	0-7
	9	I	0-7
	10	A	0-7
	11	S	0-7
	12	E	0-7
	13	C	0-7
14	Blank		-
15-20	Self Estimates I - Ranks		
	15	R	1-6
	16	I	1-6
	17-	A	1-6
	18	S	1-6
	19	E	1-6
	20	C	1-6
21	Blank		-
22-27	Self Estimates II - Scores		
	22	R	0-7
	23	I	0-7
	24	A	0-7
	25	S	0-7
	26	E	0-7
	27	C	0-7
28	Blank		
29-34	Self Estimates II - Ranks		
	29	R	1-6
	30	I	1-6
	31	A	1-6
	32	S	1-6
	33	E	1-6
	34	C	1-6
35	Blank		-

CARD 107

Self-Directed Search
(Continued)

Cols.	Description	Code
36-47	Total Scores	
	36-37	00-50
	38-39	00-50
	40-41	00-50
	42-43	00-50
	44-45	00-50
	46-47	
48	Blank	-
49-60	Total Weights	
	49-50	00-15
	51-52	00-15
	53-54	00-15
	55-56	00-15
	57-58	00-15
	59-60	
61	Blank	-
62-64	Highest Weight(s)	K
65	Blank	-
66-68	Second Highest Weight(s)	K
69	Blank	-
70-72	Third Highest Weight(s)	K
73-77	Blank	-
78-80	Card Number	107

CARD 108

CMI Competence Tests

Cols.	Description	Code
1-2	Site ID	-
3-6	Student Number	A
7	Blank	-
8-9	Part 1: Knowing Yourself	RS # Correct
10	Blank	-
11-12	Part 2: Knowing About Jobs	RS # Correct
13	Blank	-
14-15	Part 3: Choosing a Job	RS # Correct
16	Blank	-
17-18	Part 4: Looking Ahead	RS # Correct
19	Blank	-
20-21	Part 5: What Should They Do	RS # Correct
22-77	Blank	-
78-80	Card Number	108

APPENDIX

B

CODES USED IN DATA FORMATS

Career Education Program
Research for Better Schools
1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103

March 15, 1975

This is an attachment to the FY 1975 Format Manual.

CODE A

Student Numbering System

1001 - 1999 = Students entered in FY 73

E2-2001 - 2299 = Students entered in FY 74

2301 - 2399 = Comparison students for FY 74

C2-2501 - 2599 = Context students for FY 74

E1-3001 - 3699 = Students entered in FY 75

C1-3701 - 3799 = Control students for FY 75

E3-3800 - 3999 = Non random experimental students entering in FY 75

4001 - 4899 = Students entered in FY 76

4901 - 4999 = Control students for FY 76

CODE B

Student Ethnicity

1 = Black

2 = White

3 = Asian-American (Oriental)

4 = Hispanic-American (Spanish Surname)

5 = American Indian (Native American)

6 = Other

CODE C

Previous School GPA

1 = F (0.0 - 0.49)

2 = D (0.5 - 1.49)

3 = C (1.5 - 2.49)

4 = B (2.5 - 3.49)

5 = A (3.5 - 4.00)

6 = not sure

CODE D

Previous School Absence Estimate

1 = absent most of the time

2 = absent very frequently

3 = absent sometimes

4 = absent infrequently

5 = almost never absent

CODE E

Post Secondary Plans

1 = Full-time employment
2 = Apprenticeship or on-the-job training program
3 = Regular military service or a service academy
4 = Full-time homemaker
5 = Vocational, technical, trade or business school
6 = Study of academic courses at junior or community college
7 = Study of technical or vocational subjects at junior or community college
8 = Four-year college or university
9 = Part-time employment
10 = Other (explain) _____

CODE F

Educational Level

1 = Elementary school
2 = Junior High School
3 = Some high school training
4 = High school diploma
5 = Some college training
6 = College degree
7 = Some graduate school training
8 = Graduate school degree
9 = Other (specify) _____

CODE G

Reasons for CEP Enrollment

1 = To receive counseling about what to do after I finish school
2 = To have more individual attention in my school program
3 = To find out about careers
4 = To have learning activities outside of the school
5 = To get into a program different from regular school
6 = To get help in finding a job
7 = To make new friends
8 = To get job training
9 = Other (explain) _____

CODE H

OCCUPATION SCALE

1. CLERICAL AND SALES WORKERS, TECHNICIANS, AND OWNERS OF LITTLE BUSINESSES.
   Examples: bank teller, business machine operator, sales clerk, draftsman, dental technician, newstand owner, tailor shop owner, secretary, receptionist

2. HIGHER EXECUTIVES, PROPRIETORS OF LARGE CONCERNS, AND MAJOR PROFESSIONALS.
   Examples: bank president, judge, executive director, city manager, department store owner, accountant, doctor, lawyer, military command officer

3. ADMINISTRATIVE PERSONNEL, SMALL INDEPENDENT BUSINESS OWNERS, AND MINOR PROFESSIONALS.
   Examples: insurance agent, store manager, car dealer, bakery shop owner, gas station owner, photographer, military non-commissioned officer, newspaper reporter, travel agent

4. UNSKILLED EMPLOYEES.
   Examples: cafeteria worker, laundry worker, messenger, janitor, unskilled factory worker, farm helpers, parking lot attendant, window cleaner, stock handler

5. SKILLED MANUAL EMPLOYEES.
   Examples: auto body repairer, carpenter, electrician, machinist, painter, plumber, policeman, postman, tailor, printer

6. BUSINESS MANAGERS, PROPRIETORS OF MEDIUM SIZED BUSINESS, AND LESSER PROFESSIONALS.
   Examples: district manager, police chief, farm manager, postmaster, sales engineer, clothing store owner, real estate broker, theater owner, librarian, military commissioned officer, nurse, teacher, pharmacist, musician

7. MACHINE OPERATORS AND SEMI-SKILLED EMPLOYEES.
   Examples: assembly line worker, bus driver, foundry worker, meat cutter, roofer, truck driver, welder, military enlisted person

8. HOUSEWIFE.

9. UNEMPLOYED.

10. UNKNOWN/OTHER.

CODE I

Course Code Numbers

100 Level - Career Exploration

200 Level - Basic Skills

300 Level - Guidance

400 Level - Specialization

CODE J

Course Grade Conversions

Blank = Incomplete

*9 = Pass

4 = A

3 = B

2 = C

1 = D

0 = F/Fail

* Pass is entered as a nine which is not included in cumulative averages.

CODE K

Realistic	=	1
Investigative	=	2
Artistic	=	3
Social	=	4
Enterprising	=	5
Conventional	=	6

UNPUBLISHED INSTRUMENTS

DATE: _____

CAREER EDUCATION PROGRAM

Student Demographic Data Questionnaire

NAME: _____

ADDRESS: _____

DATE OF BIRTH: _____ (Month) _____ (Day) _____ (Year) PHONE NUMBER: _____

A. School grade level as of September 1974

1. ☐ 9th grade
2. ☐ 10th grade
3. ☐ 11th grade
4. ☐ 12th grade

B. Sex

1. ☐ Male
2. ☐ Female

C. Race

1. ☐ Black
2. ☐ White
3. ☐ Asian-American (Oriental)
4. ☐ Hispanic-American (Spanish Surname)
5. ☐ American Indian (Native American)
6. ☐ Other (specify) _____

D. Which of the following is closest to your letter grade average over the last year in school?

1. ☐ F (0.0-0.49)
2. ☐ D (0.5-1.49)
3. ☐ C (1.5-2.49)
4. ☐ B (2.5-3.49)
5. ☐ A (3.5-4.00)

E. Which of the following best describes your absense rate over the last year in school?

1. ☐ absent most of the time
2. ☐ absent very frequently
3. ☐ absent sometimes
4. ☐ absent infrequently
5. ☐ almost never absent

F. What do you expect to be doing after completing your secondary school program? (check as many as apply.)

1. ☐ Full-time employment
2. ☐ Apprenticeship or on-the-job training program
3. ☐ Regular military service or a service academy
4. ☐ Full-time homemaker
5. ☐ Vocational, technical, trade or business school
6. ☐ Study of academic courses at junior or community college
7. ☐ Study of technical or vocational subjects at junior or community college
8. ☐ Four-year college or university
9. ☐ Part-time employment
10. ☐ Other (explain) _____
11. ☐ Don't know

G. What is the highest level of formal education completed by your father?

1. ☐ Elementary school
2. ☐ Junior High School
3. ☐ Some high school training
4. ☐ High school diploma
5. ☐ Some college training
6. ☐ College degree
7. ☐ Some graduate school training
8. ☐ Graduate school degree
9. ☐ Other (specify) _____
10. ☐ Don't know

H. What is the highest level of formal education completed by your mother?

1. ☐ Elementary school
2. ☐ Junior High School
3. ☐ Some high school training
4. ☐ High school diploma
5. ☐ Some college training
6. ☐ College degree
7. ☐ Some graduate school training
8. ☐ Graduate school degree
9. ☐ Other (specity) _____
10. ☐ Don't know

I. From the following rank the first (1), second (2) and third (3) most important reasons why you applied for the Career Education Program

1. ☐ To receive counseling about what to do after I finish school
2. ☐ To have more individual attention in my school program
3. ☐ To find out about careers
4. ☐ To have learning activities outside of the school
5. ☐ To get into a program different from regular school
6. ☐ To get help in finding a job
7. ☐ To make new friends
8. ☐ To get job training
9. ☐ Other (explain) _____

J. Do you plan to get a secondary school diploma?

1. ☐ Yes
2. ☐ No
3. ☐ Not Sure

K. I'd say school is really worthwhile.

Strongly Disagree				Strongly Agree
1	2	3	4	5

L. I've learned a lot from my school program.

Strongly Disagree				Strongly Agree
1	2	3	4	5

FOR THE FOUR QUESTIONS THAT FOLLOW USE ANSWERS FROM THE OCCUPATION SCALE ON THE LAST PAGE OF THIS QUESTIONNAIRE

M. From the list in the OCCUPATION SCALE which category best describes the work done by your father or male guardian?

Category Number _____
If 11 (Other), please explain _____

N. From the list in the OCCUPATION SCALE which category best describes the work done by your mother or female guardian?

Category Number _____
If 11 (Other), please explain _____

O. From the list in the OCCUPATION SCALE which best describes the type of work you plan to do right after you finish your formal education?

Category Number _____
If 11 (Other), please explain _____

P. From the list in the OCCUPATION SCALE which category best describes the type of work you expect to be doing 5 years after you finish your formal education?

Category Number _____
If 11 (Other), please explain _____

OCCUPATION SCALE

1. CLERICAL AND SALES WORKERS, TECHNICIANS, AND OWNERS OF LITTLE BUSINESSES. Examples: bank teller, business machine operator, sales clerk, draftsman, dental technician, newsstand owner, tailor shop owner, secretary, receptionist

2. HIGHER EXECUTIVES, PROPRIETORS OF LARGE CONCERNS, AND MAJOR PROFESSIONALS. Examples: bank president, judge, executive director, city manager, department store owner, accountant, doctor, lawyer, military command officer

3. ADMINISTRATIVE PERSONNEL, SMALL INDEPENDENT BUSINESS OWNERS, AND MINOR PROFESSIONALS. Examples: insurance agent, store manager, car dealer, bakery shop owner, gas station owner, photographer, military non-commissioned officer, newspaper reporter, travel agent

4. UNSKILLED EMPLOYEES. Examples: cafeteria worker, laundry worker, messenger, janitor, unskilled factory worker, farm helpers, parking lot attendant, window cleaner, stock handler

5. SKILLED MANUAL EMPLOYEES. Examples: auto body repairer, carpenter, electrician, machinist, painter, plumber, policeman, postman, tailor, printer

6. BUSINESS MANAGERS, PROPRIETORS OF MEDIUM SIZED BUSINESS, AND LESSER PROFESSIONALS. Examples: district manager, police chief, farm manager, postmaster, sales engineer, clothing store owner, real estate broker, theater owner, librarian, military commissioned officer, nurse, teacher, pharmacist, musician

7. MACHINE OPERATORS AND SEMI-SKILLED EMPLOYEES. Examples: assembly line worker, bus driver, foundry worker, meat cutter, roofer, truck driver, welder, military enlisted person

8. HOUSEWIFE

9. UNEMPLOYED

10. UNKNOWN

11. OTHER

STUDENT ATTITUDE SURVEY

1975 Form

Career Education Program
Research for Better Schools, Inc.
1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103

STUDENT ATTITUDE SURVEY

INSTRUCTIONS

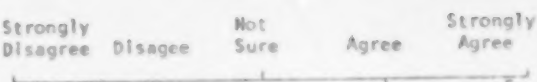
In developing school programs and planning for the future, it is important to know what students think about various aspects of their life and education. This questionnaire has been designed to give you an opportunity to express your opinions about these issues based on your experiences over the past year.

This is not a test and there are no right or wrong answers. Your honest opinions will be appreciated and helpful in improving the school program. All answers will be kept confidential. Please fill in your name and name grid on the answer sheet. If you have any questions, raise your hand for assistance.

Please read each statement carefully and think about your experiences over the past year in terms of what the statement says. The numbers on the answer sheet correspond to the numbers of the statements. Be sure to fill in the correct space for each question. If you change your mind, erase the mark completely and then fill in your new answer.

For each statement, fill in the number on the answer sheet which shows the extent of your agreement or disagreement with the statement. Each statement can be answered "1", "2", "3", "4", or "5". If you fill in a higher number (4 or 5), it means that you agree with what the statement says. For example, a "5" means that you strongly agree with what the statement says while a "4" means that you just agree with the statement. If you fill in a lower number, it means that you disagree with what the statement says. For example, a "1" means that you strongly disagree with what the statement says while a "2" means that you just disagree with the statement. A "3" means that you're not sure how much you agree or disagree.

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE



1. There is a great deal being taught at my school that is useful for me as a person.
2. The teachers at my school do not seem to know enough about what they're teaching.
3. The facilities at my school are old and out-dated.
4. I've learned a lot from my schcol program.
5. My school counseling program has shown me some interesting things about different careers.
6. My school has a lot of books and equipment that I can use to help myself learn.
7. The experiences I get in my school learning sessions nave not really helped me to learn.
8. Most of the courses in school are useful.
9. There are very few people and places in my school that I can go to when I have a personal problem.
10. I'd say school was really worthwhile.
11. My school does not have very good equipment to help learning.
12. The counseling program at my school has been good for me.
13. I used many new materials to help me in my school work.
14. My school uses a variety of ways to help us learn - not just a classroom and teacher.
15. Some of the ideas I've gotten in school have helped me get interested in some new area.
16. School has always been boring - I can hardly wait until I'm out.
17. Education, even vocational education, doesn't help with your job when you leave school.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE

Strongly Disagree	Disagee	Not Sure	Agree	Strongly Agree
1	2	3	4	5

18. My parents are not very excited about the education I am getting.

19. My school program, in general, has not been very good.

20. Much of what I learn in school I can use in a job.

21. I like school because I learn a lot of new things there.

22. The people who run my school probably do not enjoy what they're doing.

23. Not much of the advice I have gotten in my school has helped me decide on what I want for my future.

24. My school's counseling program isn't really helping me get ready for things I'll do after I graduate.

25. The teachers I had in my school were not very interesting.

26. School, in general, is not doing enough to prepare me for the life I'll lead after I graduate.

27. I don't know what is important to me in looking for a job.

28. It's often who you know, not what you know, that's important in getting a job.

29. One reason your job is important is because it determines how much you can earn.

30. I keep changing my occupational choice.

31. You should choose an occupation, than plan how to enter it.

32. I know the educational requirements for jobs that I'm interested in.

33. I don't know how to fill out a job application.

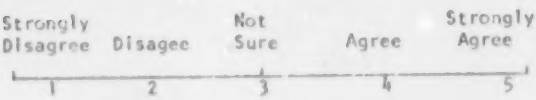
34. I don't know what courses I should take in school to prepare for careers that interest me.

35. When you are choosing a job, you should consider what kind of person you are.

36. Once you choose a job, you can't choose another one.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE



37. I don't know which kind of work I should choose.

38. I know what kinds of jobs I would not like to have.

39. I am not going to worry about choosing a job since you don't have anything to say about it anyway.

40. I know the financial rewards (salary, fringe benefits, etc.) for the jobs I'm interested in.

41. I'm not going to worry about choosing an occupation until I'm out of school.

42. I don't know whether or not I'll have to go to college to get the job I want.

43. I know how to write a resume in applying for a job.

44. I know what kind of work would fit my personality.

45. I have little or no idea of what working will be like.

46. I don't know how to go about getting into the kind of work I want to do.

47. I often think about careers I might want to enter.

48. I know what kinds of jobs I would be good at.

49. The best thing would be to try out several jobs, and then choose one you like.

50. I don't know what kinds of jobs I would enjoy.

51. I know very little about the requirements of jobs.

52. I'd like it if I could find someone who would tell me how to solve my personal problems.

53. I don't question my worth as a person, even if I think others do.

54. When people say nice things about me, I find it difficult to believe they really mean it. I think maybe they're kidding me or just aren't being sincere.

55. If there is any criticism or anyone says anything about me, I just can't take it.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE

Strongly Disagree	Disagee	Not Sure	Agree	Strongly Agree
1	2	3	4	5

56. I don't say much at social affairs because I'm afraid that people would criticize me or laugh if I say the wrong thing.

57. I realize that I'm not living very effectively but I just don't believe that I've got it in me to use my energies in better ways.

58. I look on most of the feelings and impulses I have toward people as being quite natural and acceptable.

59. Something inside me just won't let me be satisfied with any job I've done - if it turns out well, I get a very smug feeling that this is beneath me, I shouldn't be satisfied with this, this isn't a fair test.

60. I feel different from other people. I'd like to have the feeling of security that comes from knowing I'm not too different from others.

61. I'm afraid for people that I like to find out what I'm really like, for fear they'd be disappointed in me.

62. I am frequently bothered by feelings of inferiority.

63. Because of other people, I haven't been able to achieve as much as I should have.

64. I am quite shy and self-conscious in social situations.

65. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.

66. I seem to have a real inner strength in handling things. I'm on a pretty solid foundation and it makes me pretty sure of myself.

67. I feel self-conscious when I'm with people who have a superior position to mine in business or at school.

68. I think I'm neurotic or something.

69. Very often I don't try to be friendly with people because I think they won't like me.

70. I feel that I'm a person of worth, on an equal plane with others.

71. I can't avoid feeling guilty about the way I feel toward certain people in my life.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE

Strongly Disagree	Disagee	Not Sure	Agree	Strongly Agree
1	2	3	4	5

72. I'm not afraid of meeting new people. I feel that I'm a worthwhile person and there's no reason why they should dislike me.

73. I sort of only half-believe in myself.

74. I'm very sensitive. People say things and I have a tendency to think they're criticizing me or insulting me in some way and later when I think of it, they may not have meant anything like that at all.

75. I think I have certain abilities and other people say so too, but I wonder if I'm not giving them an importance way beyond what they deserve.

76. I feel confident that I can do something about the problems that may arise in the future.

77. I guess I put on a show to impress people. I know I'm not the person I pretend to be.

78. I do not worry or condemn myself if other people pass judgment against me.

79. I don't feel very normal, but I want to feel normal.

80. When I'm in a group I usually don't say much for fear of saying the wrong thing.

81. I have a tendency to sidestep my problems.

82. Even when people do think well of me, I feel sort of guilty because I know I must be fooling them - that if I were really to be myself, they wouldn't think well of me.

83. I feel that I'm on the same level as other people and that helps to establish good relations with them.

84. I feel that people are apt to react differently to me than they would normally react to other people.

85. I live too much by other people's standards.

86. When I have to address a group, I get self-conscious and have difficulty saying things well.

87. If I didn't always have such hard luck, I'd accomplish much more than I have.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE

Strongly Disagree	Disagee	Not Sure	Agree	Strongly Agree
1	2	3	4	5

88. I can be comfortable with all varieties of people - from the highest to the lowest.

89. I can become so absorbed in the work I'm doing that it doesn't bother me not to have any intimate friends.

90. I don't approve of spending time and energy in doing things for other people. I believe in looking to my family and myself more and letting others shift for themselves.

91. I don't approve of doing favors for people. If you're too agreeable they'll take advantage of you.

92. I usually ignore the feelings of others when I'm accomplishing some important end.

93. There's no sense in compromising. When people have values I don't like, I just don't care to have much to do with them.

94. The person you marry may not be perfect, but I believe in trying to get him (or her) to change along desirable lines.

95. I see no objection to stepping on other people's toes a little if it'll help me get what I want in life.

96. I try to get people to do what I want them to do, in one way or another.

97. I often tell people what they should do when they're having trouble in making a decision.

98. I enjoy myself most when I'm alone, away from other people.

99. I feel neither above or below the people I meet.

100. Sometimes people misunderstand me when I try to keep them from making mistakes that could have an important effect on their lives.

101. There are very few times when I compliment people if I don't know them well.

102. I enjoy doing little favors for people even if I don't know them well.

103. I prefer to be alone rather than have close friendships with any of the people around me.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

USE THIS SCALE FOR ALL STATEMENTS ON THIS PAGE

Strongly Disagree	Disagee	Not Sure	Agree	Strongly Agree
1	2	3	4	5

104. I seldom worry about other people. I'm really self-centered.

105. I believe that people should get credit for their accompiishments, but I seldom come across work that deserves praise.

106. When someone asks for advice about some personal problem, I'm most likely to say, "It's up to you to decide," rather than tell him what he should do.

107. I feel that for the most part one has to fight his way through life. That means that people who stand in the way will be hurt.

108. I can't help feeling superior (or inferior) to most of the people I know.

109. I don't hesitate to urge people to live by the same high set of values which I have for myself.

110. I can be friendly with people who do things which I consider wrong.

111. If people are weak and inefficient I'm inclined to take advantage of them. I believe you must be strong to achieve your goals.

112. I'm easily irritated by people who argue with me.

113. When I'm dealing with younger persons, I expect them to do what I tell them.

114. I don't see much point to doing things for others unless they can do you some good later on.

115. If someone I know is having difficulty in working things out for himself, I like to tell him what to do.

PLEASE ANSWER ALL STATEMENTS ON ANSWER SHEET

ANALYSIS OF DATA REPRESENTATIVENESS

DATA REPRESENTATIVENESS

The experimental (E1) and control (C1) groups were originally constituted by random selection from a common pool of volunteer applicants for the program.[1] The intention of random assignment was to establish true experimental conditions wherein comparative student effects could be tested with maximum student group equivalence. Two factors typically affect the assurances provided by randomization: student attrition during the year and student absences during testing. Both factors tend to reduce the power of randomization by introducing unknown biases into the final data pairs used for hypothesis testing. To the degree that characteristics of the missing cases are known, the extent of these biases may be estimated and accounted for in hypothesis testing.

During the course of the 1974-1975 year, 81 true experimentals and 17 true controls dropped from the program (the controls dropped out of school entirely). Another 24 experimentals and 15 control students were not available for posttesting. The proportional effects of these missing cases in terms of group size are presented in Table 1.

Table 1

Group Attrition

Measure / Groups	Initial n	Drops* #	Drops* %	Absences #	Absences %	Final n	% of Initial n
E1	254	81	31.9	24	9.4	149	58.7
C1	86	17	19.8	15	17.4	54	62.8
Total	340	98	28.8	39	11.5	203	59.7

* For E1 subjects drop is from program; for C1 subjects drop is from school.

[1]The E2 and C2 groups have not been included in analyses of data representativeness because the small sizes of the dropout subsamples would not allow meaningful analyses.

As can be seen from these figures the group attrition was substantial, with the final data pairs accounting for about three-fifths of the initial samples. The proportion of drops was higher among the EI group while the testing absences were higher among the CI group. This substantial reduction in samples available for final analyses serves to emphasize the need for an investigation of data representativeness.

The RBS evaluation design included procedures for determining data representativeness. The following pretest data were collected on all subjects to enable investigation of cases missing by the posttest time:

1. Grade Level
2. Sex
3. Race
4. Father's Occupation
5. Mother's Occupation
6. Immediate Occupational Plans
7. Achievement Level

Each of the variables listed above was included in the analyses. In each case the pretest results obtained from the retained subsample were compared with analogous results from the eliminated (drops plus absences) subsample. The degree to which these samples were found to be not different is the degree to which the final data were judged to be representative.

The results for grade level are presented in Table 2. In terms of grade level the EI group composition was not significantly altered by attrition. Chi square tests by grade on the retained and eliminated subsamples showed no significant departures from the expected frequencies.

Table 2

Data Representativeness
by Grade Level

Grade \ Sample	EI Retained Subsample fo	fe	χ^2	EI Eliminated Subsample fo	fe	χ^2	EI Total Sample fo	χ^2
9	40	39.0	.026	26	27.0	.037	66	.063
10	26	25.4	.014	17	17.6	.020	43	.034
11	65	65.6	.005	46	45.4	.008	111	.013
12	18	18.9	.043	14	13.0	.077	32	.120
Total	149	143.9	.088	103	103.0	.142	252	.230

Grade \ Sample	CI Retained Subsample fo	fe	χ^2	CI Eliminated Subsample fo	fe	χ^2	CI Total Sample fo	χ^2
9	7 (7.5)	11.4	1.334	11	6.6	2.933	18	4.267*
10	5 (7.5)	7.0	.321	6 (5.5)	4.0	.563	11	.884
11	36	26.7	3.239*	6 (6.5)	15.3	5.061	42	8.300*
12	6 (7.5)	8.9	.647	8 (7.5)	5.1	1.129	14	1.776
Total	54	54.0	5.541	31	31.0	9.686*	85	15.2270

* $p < .10$ at df = 3 if $\chi^2 \geq 6.251$ or df = 1 and $\chi^2 \geq 2.706$

fo = observed frequency
f_e = expected frequency
χ^2 = chi square

The CI subsamples, however, evidenced some disproportionate attrition. Significantly more 9th graders and fewer 11th graders than expected were in the eliminated subsample. Likewise, significantly more eleventh graders than expected were found in the retained subsample.

The effect of this disproportion was to render the CI group older than the EI group. The average CI grade level was 10.759 compared with 10.409 for the EI group. This demonstrates one element of unrepresentativeness created by attrition and suggests that an accommodation be made in testing comparative hypotheses (EI vs. CI). Where main effects are not found, grade level may be suspected of differentially affecting group means. This calls for stratified analyses of effect which control for grade level.

The results of chi square analyses on sex group categories are presented in Table 3. In each case the expected frequencies and

Table 3

Data Representativeness
by Sex

Sample / Sex	EI Retained Subsample fo	fe	χ^2	EI Eliminated Subsample fo	fe	χ^2	EI Total Sample fo	χ^2
Male	47	46.9	.000	32	32.0	.000	79	.000
Female	101	101.0	.000	69	69.0	.000	170	.000
Total	148	147.9	.000	101	101.0	.000	249	.006

Sample / Sex	CI Retained Subsample fo	fe	χ^2	CI Eliminated Subsample fo	fe	χ^2	CI Total Sample fo	χ^2
Male	16	16.0	.000	10	10.0	.000	26	.000
Female	37	37.0	.000	23	23.0	.000	60	.000
Total	53	53.0	.000	33	33.0	.000	86	.000

fo = observed frequency
fe = expected frequency
χ^2 = chi square, $p < .10$ at df = 1 if $\chi^2 \geq 2.706$

observed frequencies were remarkably similar. No unrepresentativeness was indicated.

Similar chi square analyses for ethnic group membership appear in Table 4. These analyses demonstrated no significant differences on this variable and supported the representativeness of the final data.

Table 4

Data Representativeness
by Race

Race \ Sample	EI Retained Subsample fo	fe	χ^2	EI Eliminated Subsample fo	fe	χ^2	EI Total Sample fo	χ^2
Black	93	90.9	.049	60	62.1	.071	153	.120
White	46	48.1	.092	35	32.8	.148	81	.240
Other	9 (8.9)	8.9	.018	6	6.0	.000	15	.018
Total	148	147.9	.159	101	100.9	.219	299	.378

Race \ Sample	CI Retained Subsample fo	fe	χ^2	CI Eliminated Subsample fo	fe	χ^2	CI Total Sample fo	χ^2
Black	40	35.7	.518	18	22.3	.631	58	1.149
White	11	12.9	.280	10	8.0	.621	21	.901
Other	2 (2.5)	4.3	.753	5 (4.5)	2.7	1.200	7	1.953
Total	53	52.9	1.551	33	32.0	2.452	86	4.003

fo = observed frequency
fe = expected frequency
χ^2 = chi square, $p < .10$ at df = 1 if $\chi^2 \geq 2.706$

Tables 5 and 6 present analyses of observed vs. expected frequencies in each occupational category for both mothers and fathers. In no case was a chi square value large enough to indicate statistical significance. Thus parental occupation data also support the representativeness of the data.

The immediate occupational plans of students were also tested for attrition effects. The results are presented in Table 7. No category produced substantial differences between expected and observed values for either group. Occupational plans offer no indications of data unrepresentativeness.

Table 5

Data Representativeness
by Father's Occupation

Sample / Occupations*	EI Retained Subsample fo	fe	χ^2	EI Elliminated Subsample fo	fe	χ^2	EI Total Sample fo	χ^2
1	7 (6.5)	4.7	.689	1 (1.5)	3.3	.982	8	.671
2	12	12.5	.20	9 (8.5)	8.5	.000	21	.020
3	8 (7.5)	7.7	.005	5 (5.5)	5.3	.008	13	.013
4	4 (4.5)	7.7	1.330	9 (8.5)	5.3	1.932	13	3.262
5	43	43.3	.002	30	29.7	.003	73	.005
6	26	26.7	.018	19	18.3	.027	45	.045
7	12	10.1	.357	5 (5.5)	6.9	.284	17	.641
8	3 (3.5)	3.6	.003	3 (2.5)	2.4	.004	6	.007
9	0	0.0	.000	0	0.0	.000	0	.000
10	5 (4.5)	4.7	.009	3 (3.5)	3.3	.012	8	.021
11	14	13.0	.077	8 (8.5)	9.0	.028	22	.105
Total	134	134.0	2.510	92	92.0	3.28	226	5.790

Sample / Occupations*	CI Retained Subsample fo	fe	χ^2	CI Elliminated Subsample fo	fe	χ^2	CI Total Sample fo	χ^2
1	0	0.0	.000	0	0.0	.000	0	.000
2	3 (2.5)	2.9	.055	2	2.0	.000	5	.055
3	4 (4.5)	4.1	.039	3 (2.5)	2.8	.032	7	.071
4	7 (6.5)	6.5	.000	4 (4.5)	4.5	.000	11	.000
5	13	10.7	.464	5 (5.5)	7.3	.444	18	.938
6	9 (8.5)	8.3	.005	5 (5.5)	5.7	.007	14	.012
7	4 (4.5)	4.1	.039	3 (2.5)	2.8	.032	7	.071
8	0 (0.5)	1.2	.408	2 (1.5)	.8	.613	2	1.021
9	1 (0.5)	.6	.017	0 (0.5)	.4	.025	1	.042
10	4 (4.5)	4.8	.019	4 (3.5)	3.2	.013	8	.032
11	2 (2.5)	3.6	.336	4 (3.5)	2.4	.504	6	.840
Total	47	46.8	1.412	32	31.9	1.670	79	3.082

* categories are taken from the Hollingshead scale

fo = observed frequency
fe = expected frequency
χ^2 = chi square, $p < .10$ at 10 df when $\chi^2 \geq 15.987$

Table 6

Data Representativeness
by Mother's Occupation

Occupations* \ Sample	EI Retained Subsample fo	fe	χ^2	EI Eliminated Subsample fo	fe	χ^2	EI Total Sample fo	χ^2
1	0 (0.5)	.6	.017	1 (0.5)	.4	.025	1	.042
2	14	12.4	.206	7 (7.5)	8.6	.141	21	.347
3	3 (2.5)	2.4	.034	1 (1.5)	1.6	.006	4	.010
4	24	24.8	.026	18	17.2	.037	42	.063
5	3 (3.5)	3.5	.000	3 (2.5)	2.4	.004	6	.004
6	6 (6.5)	7.1	.051	6 (5.5)	4.9	.073	12	.124
7	20	15.9	1.057	7 (7.5)	11.1	1.168	27	2.225
8	3 (3.5)	4.7	.306	5 (4.5)	3.2	.528	8	.834
9	53	55.4	.104	41	38.6	.149	94	.253
10	2 (2.5)	2.9	.055	3 (2.5)	2.0	.125	5	.180
11	7 (6.5)	5.3	.272	2 (2.5)	3.7	.389	9	.661
Total	135	135.0	2.098	94	93.7	2.648	229	4.743

Occupations* \ Sample	CI Retained Subsample fo	fe	χ^2	CI Eliminated Subsample fo	fe	χ^2	CI Total Sample fo	χ^2
1	0 (0.5)	.6	.017	1 (0.5)	.3	.133	1	.150
2	5 (4.5)	3.6	.225	1 (1.5)	2.3	.278	6	.503
3	0 (0.5)	.6	.017	1 (0.5)	.3	.133	1	.150
4	3 (3.5)	4.3	.149	4 (3.5)	2.7	.237	7	.386
5	3 (2.5)	2.4	.004	1 (1.5)	1.6	.006	4	.010
6	2 (1.5)	1.8	.050	1 (1.5)	1.2	.075	3	.125
7	10	7.3	.999	2 (2.5)	4.7	1.030	12	2.029
8	5 (4.5)	3.6	.225	1 (1.5)	2.3	.278	6	.503
9	18	19.4	.101	14	12.6	.156	32	.257
10	0 (0.5)	.6	.017	1 (0.5)	.3	.133	1	.150
11	2 (2.5)	3.6	.336	4 (3.5)	2.3	.626	6	.962
Total	48	47.8	2.140	31	30.6	3.055	79	5.225

* categories are taken from the Hollingshead scale

fo = observed frequency
fe = expected frequency
χ^2 = chi square, $p < .10$ at 10 df when $\chi^2 \geq 15.987$

Table 7

Data Representativeness
by Immediate Occupational Plans

Plans* \ Sample	EI Retained Subsample fo	fe	x^2	EI Eliminated Subsample fo	fe	x^2	EI Total Sample fo	x^2
1	18	18.9	.043	14	13.1	.062	32	105
2	26	23.1	.364	13	15.9	.529	39	893
3	11	10.0	.100	6 (6.5)	6.9	.023	17	123
4	31	28.4	.238	17	19.6	.345	48	583
5	14	16.0	.250	13	11.0	.364	27	514
6	5 (5.5)	7.1	.361	7 (6.5)	4.9	.522	12	883
7	1 (0.5)	.6	.017	0 (0.5)	.4	.025	1	042
8	0	0.0	.000	0	0.0	.000	0	.000
9	2 (1.5)	1.2	.075	0 (0.5)	.8	.113	2	.188
10	9 (9.5)	11.2	.289	10	7.8	.621	19	.910
11	19	19.5	.013	14	13.5	.019	33	.032
Total	136	136.8	1.741	94	93.9	2.623	230	4.373

Plans* \ Sample	CI Retained Subsample fo	fe	x^2	CI Eliminated Subsample fo	fe	x^2	CI Total Sample fo	x^2
1	6 (6.5)	7.3	.083	6 (5.5)	4.7	.136	12	.224
2	8 (8.5)	9.1	.040	7 (6.5)	5.9	.061	15	.101
3	3 (3.5)	4.3	.149	4 (3.5)	2.7	.237	7	.386
4	11	9.7	.174	5 (5.5)	6.3	.102	16	.276
5	4 (3.5)	3.0	.083	1 (1.5)	2.0	.125	5	.208
6	1 (1.5)	1.2	.075	1 (0.5)	.8	.113	2	.188
7	1 (1.5)	1.2	.075	1 (0.5)	.8	.113	2	.188
8	0	0.0	.000	0	0.0	.000	0	.000
9	0	0.0	.000	0	0.0	.000	0	.000
10	7 (6.5)	6.1	.026	3 (3.5)	3.9	.041	10	.067
11	7 (6.5)	6.1	.026	3 (3.5)	3.9	.041	10	.067
Total	48	48.0	.736	31	31.0	.969	79	.705

* categories are taken from the Hollingshead scale.

fo = observed frequency
fe = expected frequency
x^2 = chi square, $p < .10$ at 10 df when $x^2 \geq 15.987$

The final tests employed were t-tests for independent samples on the pretest scores of the CTBS Reading Comprehension, Arithmetic Concepts and Arithmetic Applications. The results appear in Table 8.

Table 8

Data Representativeness
by CTBS Pretest Achievement Level

Reading Comprehension

EI Retained Subsample	EI Eliminated Subsample	CI Retained Subsample	CI Eliminated Subsample
$n = 140$ $\bar{X} = 520.59$ $\sigma = 78.36$	$n = 101$ $\bar{X} = 527.13$ $\sigma = 88.48$	$n = 52$ $\bar{X} = 528.69$ $\sigma = 77.20$	$n = 30$ $\bar{X} = 532.37$ $\sigma = 68.59$
$t = .6039$		$t = .2135$	

Arithmetic Concepts

EI Retained Subsample	EI Eliminated Subsample	CI Retained Subsample	CI Eliminated Subsample
$n = 142$ $\bar{X} = 506.44$ $\sigma = 69.03$	$n = 101$ $\bar{X} = 506.20$ $\sigma = 85.64$	$n = 50$ $\bar{X} = 516.78$ $\sigma = 89.68$	$n = 30$ $\bar{X} = 520.23$ $\sigma = 75.65$
$t = .0246$		$t = .3116$	

Arithmetic Applications

EI Retained Subsample	EI Eliminated Subsample	CI Retained Subsample	CI Eliminated Subsample
$n = 140$ $\bar{X} = 489.01$ $\sigma = 70.64$	$n = 101$ $\bar{X} = 494.63$ $\sigma = 79.32$	$n = 50$ $\bar{X} = 497.46$ $\sigma = 70.29$	$n = 29$ $\bar{X} = 493.76$ $\sigma = 77.37$
$t = .5768$		$t = .2147$	

In all cases the eliminated subsample scores were statistically not different from the retained subsample scores. These results also support the representativeness of final data pairs.

In testing the representativeness of the data pairs available for final analyses comparisons were made with similar data on subjects who had withdrawn from the program or had been absent for the pretest. Thus, within the EI and CI groups the retained and eliminated subsamples were directly compared on available pretest data. The pretesting of all

students enabled comprehensive analyses. Demographic, background, and achievement variables were included. Although substantial attrition had occurred, these analyses implied a strong similarity between the initial random groups and the groups available for final analysis. Significant factors affecting representativeness were found related to grade level only. On all other criteria the final data were found to be representative. It can be concluded that the random design remained intact to the degree that the variables investigated provide a complete representation. The single exception, grade level, suggests the need for stratified testing of comparative hypotheses (EI vs. CI) controling for grade level.